STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 161597

TO: Marcela Cordero Garcia
Location: REM 3C35/3C18
Art Unit: 1654
Tuesday, August 30, 2005
Case Serial Number: 10/604022

From: Barb O'Bryen
Location: Biotech-Chem Library
Remsen 1a69
Phone: 571-272-2518

barbara.obryen@uspto.gov

Search Notes

161597

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ResponseHeader=Commercial Database Search Request

AccessDB#= _____

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MyDate=Thu Aug 4 15:42:41 EDT 2005

submitto=Biotech01@uspto.gov

Name=Marcela M Cordero Garcia

80381

Empno=80381

Phone=2-2939

Artunit=1654

Office=REM3C35/3C18

Serialnum=10/604,022

PatClass=530/333

Earliest=6/23/2003

Searchtopic=Please search inventors:
COLLINS, JONATHAN MCKINNO
LAMBERT, JOSEPH JOSHUA
COLLINS, MICHAEL JOHN

Please search in general: methods of solid phase synthesis of peptides using protecting groups and microwave energy.

Please refer to claim 1 for more information:
A process for the solid phase synthesis of peptides which comprises:
(a)deprotecting a first amino acid linked to a solid phase resin by removing protecting first chemical groups
(b)activating chemical groups on a second amino acid to prepare the second amino acid from coupling with the first amino acid;
(c) coupling the second activated amino acid to the deprotected first amino acid to form a peptide from the first and second amino acids; and
(d)applying microwave energy to accelerate the deprotecting, activating, and coupling

****
STAFF USE ONLY

Searcher:_____
Searcher Phone: 2-
Date Searcher Picked up:_____
Date Completed:_____
Searcher Prep/Rev. Time:_____
Online Time:_____

****
Type of Search

NA#:_____ AA#:_____
Interference:____ SPDI:___
S/L:_____ Oligomer:____
Encode/Transl:_____
Structure#:_____ Text:___
Inventor:____ Litigation:___

****
Vendors and cost where applicable

STN:_____
DIALOG:_____
QUESTEL/ORBIT:_____
LEXIS/NEXIS:_____
SEQUENCE SYSTEM:_____
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Other(Specify):_____

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Biotech-Chem Library

Questions about the scope or the results of the search? Contact ***the searcher or contact:***

Mary Hale, Information Branch Supervisor
Remsen Bldg. 01 D86
571-272-2507

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1610*
- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC-Biotech-Chem Library Remsen Bldg.

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=> fil capl; d que l1; d que l9; d que l10
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FILE COVERS 1907 - 30 Aug 2005  VOL 143 ISS 10
FILE LAST UPDATED: 29 Aug 2005  (20050829/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE


L1             1 SEA FILE=CAPLUS ABB=ON  US2003-604022/AP



L6          2794 SEA FILE=CAPLUS ABB=ON  COLLINS J?/AU
L7          1805 SEA FILE=CAPLUS ABB=ON  LAMBERT J?/AU
L8          2091 SEA FILE=CAPLUS ABB=ON  COLLINS M?/AU
L9             1 SEA FILE=CAPLUS ABB=ON  L6 AND L7 AND L8



L2         21378 SEA FILE=CAPLUS ABB=ON  PEPTIDES/CT(L)SPN/RL
L6          2794 SEA FILE=CAPLUS ABB=ON  COLLINS J?/AU
L7          1805 SEA FILE=CAPLUS ABB=ON  LAMBERT J?/AU
L8          2091 SEA FILE=CAPLUS ABB=ON  COLLINS M?/AU
L10            6 SEA FILE=CAPLUS ABB=ON  (L6 OR L7 OR L8) AND L2


=> s l1 or l9 or l10

L79            6 L1 OR L9 OR L10

=> fil wpids; d que l14; d que l20

FILE 'WPIDS' ENTERED AT 16:22:39 ON 30 AUG 2005
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FILE LAST UPDATED:          26 AUG 2005      <20050826/UP>
MOST RECENT DERWENT UPDATE:     200555        <200555/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
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inventor search

- Role SPN = synthetic preparation

http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
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PLEASE CHECK:
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FOR DETAILS. <<<

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L11          538 SEA FILE=WPIDS ABB=ON  COLLINS J?/AU
L12          262 SEA FILE=WPIDS ABB=ON  LAMBERT J?/AU
L13          427 SEA FILE=WPIDS ABB=ON  COLLINS M?/AU
L14            1 SEA FILE=WPIDS ABB=ON  L11 AND L12 AND L13



L11          538 SEA FILE=WPIDS ABB=ON  COLLINS J?/AU
L12          262 SEA FILE=WPIDS ABB=ON  LAMBERT J?/AU
L13          427 SEA FILE=WPIDS ABB=ON  COLLINS M?/AU
L15        87756 SEA FILE=WPIDS ABB=ON  ?PEPTIDE?
L17        67871 SEA FILE=WPIDS ABB=ON  MICROWAV?
L20            1 SEA FILE=WPIDS ABB=ON  (L11 OR L12 OR L13) AND L15 AND L17


=> s l14 or l20

L80            1 L14 OR L20

=> fil medl; d que l29; d que l32

FILE 'MEDLINE' ENTERED AT 16:22:41 ON 30 AUG 2005

 FILE LAST UPDATED: 27 AUG 2005 (20050827/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

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L26        3358 SEA FILE=MEDLINE ABB=ON  COLLINS J?/AU
L27        1204 SEA FILE=MEDLINE ABB=ON  LAMBERT J?/AU
L28        1946 SEA FILE=MEDLINE ABB=ON  COLLINS M?/AU
L29           0 SEA FILE=MEDLINE ABB=ON  L26 AND L27 AND L28



L26        3358 SEA FILE=MEDLINE ABB=ON  COLLINS J?/AU
L27        1204 SEA FILE=MEDLINE ABB=ON  LAMBERT J?/AU
L28        1946 SEA FILE=MEDLINE ABB=ON  COLLINS M?/AU
L30       82892 SEA FILE=MEDLINE ABB=ON  PEPTIDES/CT
L31        6859 SEA FILE=MEDLINE ABB=ON  MICROWAVES/CT
L32           0 SEA FILE=MEDLINE ABB=ON  (L26 OR L27 OR L28) AND L30 AND L31


=> fil embase; d que l42; d que l47

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 FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

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L39        2766 SEA FILE=EMBASE ABB=ON  COLLINS J?/AU
L40        1088 SEA FILE=EMBASE ABB=ON  LAMBERT J?/AU
L41        1824 SEA FILE=EMBASE ABB=ON  COLLINS M?/AU
L42           0 SEA FILE=EMBASE ABB=ON  L39 AND L40 AND L41



L39        2766 SEA FILE=EMBASE ABB=ON  COLLINS J?/AU
L40        1088 SEA FILE=EMBASE ABB=ON  LAMBERT J?/AU
L41        1824 SEA FILE=EMBASE ABB=ON  COLLINS M?/AU
L43        5188 SEA FILE=EMBASE ABB=ON  MICROWAVE RADIATION/CT
L44        7824 SEA FILE=EMBASE ABB=ON  PEPTIDE SYNTHESIS/CT
L47           0 SEA FILE=EMBASE ABB=ON  (L39 OR L40 OR L41) AND L43 AND L44


=> fil dissabs; d que l60

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L54          374 SEA FILE=DISSABS ABB=ON  COLLINS J?/AU
L55          108 SEA FILE=DISSABS ABB=ON  LAMBERT J?/AU
L56          252 SEA FILE=DISSABS ABB=ON  COLLINS M?/AU
L57         5692 SEA FILE=DISSABS ABB=ON  MICROWAV?
L58        23730 SEA FILE=DISSABS ABB=ON  ?PEPTIDE?
L60            0 SEA FILE=DISSABS ABB=ON  (L54 OR L55 OR L56) AND L58 AND L57


=> fil JICST-EPLUS, PASCAL, BIOTECHNO, ESBIOBASE, BIOSIS, LIFESCI, BIOTECHDS,
ANABSTR, SCISEARCH

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=> d que l71; d que l72

L6          2794 SEA FILE=CAPLUS ABB=ON  COLLINS J?/AU
L7          1805 SEA FILE=CAPLUS ABB=ON  LAMBERT J?/AU
L8          2091 SEA FILE=CAPLUS ABB=ON  COLLINS M?/AU
L64        14254 SEA L6
L65         6197 SEA L7
L66        11333 SEA L8
L71            0 SEA L64 AND L65 AND L66



L6          2794 SEA FILE=CAPLUS ABB=ON  COLLINS J?/AU
L7          1805 SEA FILE=CAPLUS ABB=ON  LAMBERT J?/AU
L8          2091 SEA FILE=CAPLUS ABB=ON  COLLINS M?/AU
L64        14254 SEA L6
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L65         6197 SEA L7
L66        11333 SEA L8
L67       183256 SEA MICROWAV?
L68      1596598 SEA PEPTIDE# OR POLYPEPTIDE# OR OLIGOPEPTIDE#
L72            7 SEA (L64 OR L65 OR L66) AND L67 AND L68


=> dup rem l79,l72,l80
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PROCESSING COMPLETED FOR L72
PROCESSING COMPLETED FOR L80
L81           12 DUP REM L79 L72 L80 (2 DUPLICATES REMOVED)
                 ANSWERS '1-6' FROM FILE CAPLUS
                 ANSWER '7' FROM FILE BIOSIS
                 ANSWERS '8-12' FROM FILE SCISEARCH

=> d ibib ed abs hitind 1-6; d iall 7-12

L81  ANSWER 1 OF 12  CAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2004:1127148  CAPLUS
DOCUMENT NUMBER:          142:56671
TITLE:                    Microwave-assisted peptide synthesis
INVENTOR(S):              Collins, Jonathan Mckinno; Lambert,
                          Joseph Joshua; Collins, Michael John
PATENT ASSIGNEE(S):       Cem Corporation, USA
SOURCE:                   U.S. Pat. Appl. Publ., 20 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     US 2004260059         A1    20041223    US 2003-604022          20030623 <--
     CA 2471687            AA    20041223    CA 2004-2471687         20040621
     EP 1491552            A2    20041229    EP 2004-253742          20040623
     EP 1491552            A3    20050316
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
     JP 2005015483         A2    20050120    JP 2004-184604          20040623
     EP 1533025            A2    20050525    EP 2005-101287          20040623
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
PRIORITY APPLN. INFO.:                        US 2003-604022      A  20030623
                                              EP 2004-253742      A3 20040623
ED   Entered STN:  24 Dec 2004
```

AB An instrument and process for accelerating the solid-phase synthesis of peptides is disclosed. Microwave irradiation was carried out at each step of the process. The method includes the steps of deprotecting a protected first amino acid linked to a solid phase resin by admixing a deprotecting solution in a microwave transparent vessel, activating a second amino acid by adding an activating solution, coupling the second amino acid to the first acid, and cleaving the linked peptide from the solid phase resin by admixing a cleaving composition The process was applied to the synthesis of peptides Asn-Gly-Val and Gly-Asn-Ile-Tyr-Asp-Ile-Ala-Ala-Gln-Val.
IC ICM C07K001-02
INCL 530333000
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 47
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(microwave-assisted solid-phase peptide synthesis)

L81 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:997852 CAPLUS
DOCUMENT NUMBER: 142:114441
TITLE: Preparation of cyclic peptide libraries using intramolecular oxime formation
AUTHOR(S): Roberts, Kade D.; **Lambert, John N.**; Ede, Nicholas J.; Bray, Andrew M.
CORPORATE SOURCE: School of Chemistry, The University of Melbourne, Parkville, 3010, Australia
SOURCE: Journal of Peptide Science (2004), 10(11), 659-665
CODEN: JPSIEI; ISSN: 1075-2617
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 19 Nov 2004
AB A new method for the synthesis of cyclic head-to-side chain peptide libraries has been developed in which the key cyclization step involves reaction between a C-terminal ketone and an N-terminal hydroxylamine to form a macrocyclic oxime. This methodol. efficiently delivers cyclic products that consist of mixts. of syn and anti isomers.
CC 34-3 (Amino Acids, Peptides, and Proteins)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(cyclic; preparation of cyclic peptide libraries using intramol. oxime formation)
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

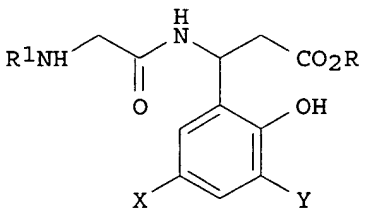
L81 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:138855 CAPLUS
DOCUMENT NUMBER: 134:353483
TITLE: The synthesis of cyclic peptides
AUTHOR(S): **Lambert, John N.**; Mitchell, Jeffrey P.; Roberts, Kade D.
CORPORATE SOURCE: School of Chemistry, The University of Melbourne, Parkville, 3010, Australia
SOURCE: Journal of the Chemical Society, Perkin Transactions 1 (2001), (5), 471-484
CODEN: JCSPCE; ISSN: 1472-7781
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
ED Entered STN: 26 Feb 2001

AB A review with 104 refs. Common and recently reported methods for the synthesis of cyclic peptides and their analogs are presented.
CC 34-0 (Amino Acids, Peptides, and Proteins)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(cyclic; synthesis of cyclic peptides)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(depsipeptides, cyclic; synthesis of cyclic peptides)
REFERENCE COUNT: 104 THERE ARE 104 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:547503 CAPLUS
DOCUMENT NUMBER: 133:150921
TITLE: Preparation of amino benzenepropanoic acid intermediates in the synthesis of αvβ3 integrin antagonists
INVENTOR(S): **Collins, Joe T.**; Devadas, Balekudru; Lu, Hwang-Fun; Malecha, James W.; Miyashiro, Julie Marion; Nagarajan, Srinivasan; Rico, Joseph Gerace; Rogers, Thomas E.
PATENT ASSIGNEE(S): G.D. Searle and Co., USA
SOURCE: U.S., 34 pp., Cont.-in-part of U.S. Ser. No. 34,758. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 6100423	A	20000808	US 1999-261822		19990303
US 6028223	A	20000222	US 1996-713555		19960827
TW 458956	B	20011011	TW 1996-85115118		19961206
US 6013651	A	20000111	US 1998-34758		19980304
PRIORITY APPLN. INFO.:			US 1995-3277P	P	19950830
			US 1996-713555	A2	19960827
			US 1998-34758	A2	19980304

OTHER SOURCE(S): MARPAT 133:150921
ED Entered STN: 10 Aug 2000
GI



I

AB Amino benzenepropanoic acids I (X, Y = halo, R = H, alkyl; R1 = H, tert-butoxycarbonyl) were prepared as intermediates useful in the preparation of pharmaceutical compds. which are αvβ3 integrin antagonists.

Thus, I.HCl (R = Et, R1 = H, X = Y = Cl) was prepared by condensation of 3,5-dichlorosalicylaldehyde with acetic anhydride to give 6,8-dichlorocoumarin, which underwent ring cleavage with lithium bis(trimethylsilyl)amide, coupling with N-(tert-butoxycarbonyl)glycine N-hydroxysuccinimide ester, and deprotection to give the product.

IC ICM C07C229-00
INCL 560042000
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of amino benzenepropanoic acid intermediates in the synthesis of αvβ3 integrin antagonists)
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:662311 CAPLUS
DOCUMENT NUMBER: 132:50241
TITLE: A direct method for the formation of peptide and carbohydrate dendrimers
AUTHOR(S): Mitchell, Jeffrey P.; Roberts, Kade D.; Langley, Jane; Koentgen, Frank; **Lambert, John N.**
CORPORATE SOURCE: School of Chemistry, The University of Melbourne, Parkville, 3052, Australia
SOURCE: Bioorganic & Medicinal Chemistry Letters (1999), 9(19), 2785-2788
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:50241
ED Entered STN: 18 Oct 1999
AB Two new methods for the modification of PAMAM dendrimers have been developed which allow the covergent synthesis of either peptide or carbohydrate-bearing dendrimer mols. Both methods involve condensation between hydroxylamino nucleophiles and appropriate carbonyl-bearing reaction partners.
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 33
IT Carbohydrates, preparation
Dendritic polymers
Peptides, preparation
RL: RCT (Reactant); **SPN (Synthetic preparation)**; PREP (Preparation); RACT (Reactant or reagent)
(direct method for the formation of peptide and carbohydrate dendrimers)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:508513 CAPLUS
DOCUMENT NUMBER: 129:245478
TITLE: Synthesis of nanotubule-forming cyclic octapeptides via an Fmoc strategy
AUTHOR(S): Polaskova, Martina E.; Ede, Nicholas J.; **Lambert, John N.**
CORPORATE SOURCE: School of Chemistry, The University of Melbourne, Parkville, VIC. 3052, Australia

SOURCE: Australian Journal of Chemistry (1998), 51(7), 535-540
CODEN: AJCHAS; ISSN: 0004-9425
PUBLISHER: CSIRO Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 17 Aug 1998
AB New syndiotactic cyclic octapeptides, namely cyclo(D-Phe-L-Asp-D-Phe-L-Asn-D-Phe-L-Asp-D-Phe-L-Asn) (I) and cyclo(D-N-MeAla-L-Asp-D-N-MeAla-L-Asn-D-N-MeAla-L-Asp-D-N-MeAla-L-Asn), have been prepared, and preliminary structural studies have been conducted. The synthesis of the linear peptides was performed by using 9-fluorenylmethoxycarbonyl (Fmoc) chemical, and head-to-tail cyclization was accomplished by using an orthogonal protection strategy and a support-bound cyclization step. Acidification of aqueous solns. of cyclic octapeptide I initiated formation of needlelike crystals whose morphol. and IR absorption behavior suggested that they were hydrogen-bonded nanotubular aggregates.
CC 34-3 (Amino Acids, Peptides, and Proteins)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(cyclic; preparation of nanotubule-forming cyclic octapeptides via fluorenylmethoxycarbonyl strategy)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 7 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
DUPLICATE 2
ACCESSION NUMBER: 2003:365494 BIOSIS
DOCUMENT NUMBER: PREV200300365494
TITLE: Novel method for enhanced solid phase **peptide** synthesis using **microwave** energy.
AUTHOR(S): **Collins, J. M.** [Reprint Author]; **Collins, M. J.**
CORPORATE SOURCE: CEM Corporation, Matthews, NC, 28106-0200, USA
SOURCE: Biopolymers, (2003) Vol. 71, No. 3, pp. 361. print.
Meeting Info.: 18th American Peptide Symposium on Peptide Revolution: Genomics, Proteomics and Therapeutics. Boston, MA, USA. July 19-23, 2003. American Peptide Society.
ISSN: 0006-3525 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Radiation biology - General 06502
Biochemistry studies - General 10060
Biochemistry studies - Proteins, peptides and amino acids 10064
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Radiation Biology
INDEX TERMS: Parts, Structures, & Systems of Organisms
reagents
INDEX TERMS: Chemicals & Biochemicals
peptide: solid phase synthesis;
peptide sequences
INDEX TERMS: Miscellaneous Descriptors

Searched by Barb O'Bryen, STIC 2-2518

microwave energy

L81 ANSWER 8 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:23807 SCISEARCH
THE GENUINE ARTICLE: 851AK
TITLE: Effect of **microwave** energy on solid phase **peptide** synthesis
AUTHOR: **Collins J M (Reprint)**; Hassman C F; King E E; **Lambert J**
CORPORATE SOURCE: CEM Corp, Div Life Sci, Matthews, NC 28106 USA jonathan.collins@cem.com
COUNTRY OF AUTHOR: USA
SOURCE: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (28 MAR 2004) Vol. 227, Part 2, pp. U207-U207. MA 549-ORGN. ISSN: 0065-7727.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 20 Jan 2005
Last Updated on STN: 20 Jan 2005
CATEGORY: CHEMISTRY, MULTIDISCIPLINARY

L81 ANSWER 9 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:23806 SCISEARCH
THE GENUINE ARTICLE: 851AK
TITLE: **Peptide** modifications using **microwave** solid phase **peptide** synthesis
AUTHOR: Hassman C F (Reprint); **Collins J M**
CORPORATE SOURCE: CEM Corp, Div Life Sci, Matthews, NC 28106 USA Fred.Hassman@cem.com
COUNTRY OF AUTHOR: USA
SOURCE: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (28 MAR 2004) Vol. 227, Part 2, pp. U207-U207. MA 548-ORGN. ISSN: 0065-7727.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 20 Jan 2005
Last Updated on STN: 20 Jan 2005
CATEGORY: CHEMISTRY, MULTIDISCIPLINARY

L81 ANSWER 10 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:23539 SCISEARCH
THE GENUINE ARTICLE: 851AK
TITLE: Synthesis of difficult **peptides** with **microwave** energy.
AUTHOR: **Collins J M (Reprint)**; Hassman C F
CORPORATE SOURCE: CEM Corp, Div Life Sci, Matthews, NC 28106 USA jonathan.collins@cem.com
COUNTRY OF AUTHOR: USA
SOURCE: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (28 MAR 2004) Vol. 227, Part 2, pp. U150-U150. MA 281-ORGN. ISSN: 0065-7727.

PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 20 Jan 2005
Last Updated on STN: 20 Jan 2005
CATEGORY: CHEMISTRY, MULTIDISCIPLINARY

L81 ANSWER 11 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:23538 SCISEARCH
THE GENUINE ARTICLE: 851AK
TITLE: **Peptide** cyclization using directed **microwave** techniques.
AUTHOR: Hassman C F (Reprint); **Collins J M**
CORPORATE SOURCE: CEM Corp, Div Life Sci, Matthews, NC 28106 USA
Fred.Hassman@cem.com
COUNTRY OF AUTHOR: USA
SOURCE: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (28 MAR 2004) Vol. 227, Part 2, pp. U150-U150. MA 280-ORGN. ISSN: 0065-7727.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 20 Jan 2005
Last Updated on STN: 20 Jan 2005
CATEGORY: CHEMISTRY, MULTIDISCIPLINARY

L81 ANSWER 12 OF 12 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:133877 SCISEARCH
THE GENUINE ARTICLE: 851VJ
TITLE: **Microwave**-enhanced solid-phase **peptide** synthesis
AUTHOR: **Collins J M**
CORPORATE SOURCE: CEM Corp, Matthews, NC 28106 USA
Jonathan.Collins@CEM.com
COUNTRY OF AUTHOR: USA
SOURCE: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, (22 AUG 2004) Vol. 228, Part 2, pp. U120-U120. MA 518-ORGN. ISSN: 0065-7727.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 18 Feb 2005
Last Updated on STN: 18 Feb 2005
CATEGORY: CHEMISTRY, MULTIDISCIPLINARY

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=> fil capl; d que l5
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L2        21378 SEA FILE=CAPLUS ABB=ON  PEPTIDES/CT(L)SPN/RL
L3        73571 SEA FILE=CAPLUS ABB=ON  MICROWAVE#/OBI
L4        43835 SEA FILE=CAPLUS ABB=ON  SOLID/OBI(W)(PHASE#/OBI OR SUPPORT#/OBI
                )
L5           11 SEA FILE=CAPLUS ABB=ON  L2 AND L3 AND L4


=> s l5 not l79

L82          10 L5 NOT L79

=> fil wpids; d que l23

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MOST RECENT DERWENT UPDATE:     200555        <200555/DW>
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    FOR DETAILS. <<<


L15        87756 SEA FILE=WPIDS ABB=ON  ?PEPTIDE?
L16        30010 SEA FILE=WPIDS ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L17        67871 SEA FILE=WPIDS ABB=ON  MICROWAV?
L22        15992 SEA FILE=WPIDS ABB=ON  L15(8A)(SYNTHESI? OR PREP?)
L23            1 SEA FILE=WPIDS ABB=ON  L22 AND L16 AND L17


=> s l23 not l80

L83            0 L23 NOT L80  previously printed

=> fil medl; d que l35; d que l37

FILE 'MEDLINE' ENTERED AT 16:25:36 ON 30 AUG 2005

 FILE LAST UPDATED: 27 AUG 2005 (20050827/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
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L30        82892 SEA FILE=MEDLINE ABB=ON  PEPTIDES/CT
L31         6859 SEA FILE=MEDLINE ABB=ON  MICROWAVES/CT
L34        25603 SEA FILE=MEDLINE ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L35            2 SEA FILE=MEDLINE ABB=ON  L30 AND L31 AND L34



L31         6859 SEA FILE=MEDLINE ABB=ON  MICROWAVES/CT
L34        25603 SEA FILE=MEDLINE ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L36        23746 SEA FILE=MEDLINE ABB=ON  D12./CT(L)CS/CT = Amino acids, peptides, and proteins
L37            3 SEA FILE=MEDLINE ABB=ON  L36 AND L31 AND L34
                                          (1) Chemical synthesis

=> s l35 or l37
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L84          3 L35 OR L37

=> fil embase; d que l50; d que l53

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 FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


L43         5188 SEA FILE=EMBASE ABB=ON  MICROWAVE RADIATION/CT
L44         7824 SEA FILE=EMBASE ABB=ON  PEPTIDE SYNTHESIS/CT
L45        28161 SEA FILE=EMBASE ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L50            2 SEA FILE=EMBASE ABB=ON  L43 AND L44 AND L45



L43         5188 SEA FILE=EMBASE ABB=ON  MICROWAVE RADIATION/CT
L45        28161 SEA FILE=EMBASE ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L51        23580 SEA FILE=EMBASE ABB=ON  PEPTIDE/CT
L53            1 SEA FILE=EMBASE ABB=ON  L51 AND L45 AND L43


=> s l50 or l53

L85          3 L50 OR L53

=> fil dissabs; d que l61

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L57         5692 SEA FILE=DISSABS ABB=ON  MICROWAV?
L58        23730 SEA FILE=DISSABS ABB=ON  ?PEPTIDE?
L59         4117 SEA FILE=DISSABS ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L61            1 SEA FILE=DISSABS ABB=ON  L58 AND L57 AND L59


=> fil JICST-EPLUS, PASCAL, BIOTECHNO, ESBIOBASE, BIOSIS, LIFESCI, BIOTECHDS,
ANABSTR, SCISEARCH

FILE 'JICST-EPLUS' ENTERED AT 16:25:41 ON 30 AUG 2005
```

FILE 'PASCAL' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'BIOTECHNO' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'ESBIOBASE' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'BIOSIS' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'LIFESCI' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'BIOTECHDS' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'ANABSTR' ENTERED AT 16:25:41 ON 30 AUG 2005

FILE 'SCISEARCH' ENTERED AT 16:25:41 ON 30 AUG 2005

=> d que l76; d que l78

```
L67      183256 SEA MICROWAV?
L68     1596598 SEA PEPTIDE# OR POLYPEPTIDE# OR OLIGOPEPTIDE#
L69      190966 SEA SOLID(2A)(PHASE# OR SUPPORT#)
L70      887799 SEA RESIN# OR COLUMN?
L73          87 SEA L67 AND L68 AND (L69 OR L70)
L75     1342730 SEA PROTECT? OR DEPROTECT?
L76           8 SEA L73 AND L75



L67      183256 SEA MICROWAV?
L68     1596598 SEA PEPTIDE# OR POLYPEPTIDE# OR OLIGOPEPTIDE#
L69      190966 SEA SOLID(2A)(PHASE# OR SUPPORT#)
L70      887799 SEA RESIN# OR COLUMN?
L74       92131 SEA L68(5A)(SYNTHESI? OR PREP?)
L78          23 SEA L74(S) L67 AND (L69 OR L70)
```

=> s (l76 or l78) not l72

L86 23 (L76 OR L78) NOT (L72) previously printed

=> => dup rem l84,l82, l61,l85,l86
FILE 'MEDLINE' ENTERED AT 16:26:56 ON 30 AUG 2005

FILE 'CAPLUS' ENTERED AT 16:26:56 ON 30 AUG 2005

PROCESSING COMPLETED FOR L84
PROCESSING COMPLETED FOR L82
PROCESSING COMPLETED FOR L61
PROCESSING COMPLETED FOR L85
PROCESSING COMPLETED FOR L86
L87 26 DUP REM L84 L82 L61 L85 L86 (14 DUPLICATES REMOVED)
ANSWERS '1-3' FROM FILE MEDLINE
ANSWERS '4-12' FROM FILE CAPLUS
ANSWER '13' FROM FILE DISSABS
ANSWER '14' FROM FILE EMBASE
ANSWER '15' FROM FILE PASCAL
ANSWER '16' FROM FILE ESBIOBASE
ANSWERS '17-18' FROM FILE BIOSIS
ANSWER '19' FROM FILE LIFESCI
ANSWERS '20-26' FROM FILE SCISEARCH

=> d iall 1-3; d ibib ed abs hitind 4-12; d iall 13-26; fil hom

L87 ANSWER 1 OF 26 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 2002664400 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12423085
TITLE: Microwave-assisted **solid-phase** synthesis of peptoids.
AUTHOR: Olivos Hernando J; Alluri Prasanna G; Reddy M Muralidhar; Salony Derek; Kodadek Thomas
CORPORATE SOURCE: Center for Biomedical Inventions, Departments of Internal Medicine and Molecular Biology, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Blvd., Dallas, TX 75390-8573, USA.
CONTRACT NUMBER: 1R21 CA 093287-01 (NCI)
SOURCE: Organic letters, (2002 Nov 14) 4 (23) 4057-9.

Journal code: 100890393. ISSN: 1523-7060.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200212
ENTRY DATE: Entered STN: 20021109
Last Updated on STN: 20021227
Entered Medline: 20021226

ABSTRACT:
Microwave irradiation reduces the reaction time for the **solid-***phase*** synthesis of peptoids. Under these conditions, coupling of each residue requires only 1 min. The purity and yields of peptoids synthesized in this way are as good as or better than those achieved using standard methods. [reaction: see text]

CONTROLLED TERM: Amino Acid Sequence
Indicators and Reagents
***Microwaves**
Peptides: CS, chemical synthesis
Peptides: CH, chemistry
***Peptoids: CS, chemical synthesis**
Peptoids: CH, chemistry
Peptoids: RE, radiation effects
Research Support, U.S. Gov't, P.H.S.
CHEMICAL NAME: 0 (Indicators and Reagents); 0 (Peptides); 0 (Peptoids)

L87 ANSWER 2 OF 26 MEDLINE on STN
ACCESSION NUMBER: 2004526085 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15496084
TITLE: An efficient synthetic route to glycoamino acid building blocks for glycopeptide synthesis.
AUTHOR: Bejugam Mallesham; Flitsch Sabine L
CORPORATE SOURCE: School of Chemistry, The University of Edinburgh, King's Buildings, West Mains Road, Edinburgh EH9 3JJ, United Kingdom.
SOURCE: Organic letters, (2004 Oct 28) 6 (22) 4001-4.
Journal code: 100890393. ISSN: 1523-7060.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200508
ENTRY DATE: Entered STN: 20041022
Last Updated on STN: 20050802
Entered Medline: 20050801

ABSTRACT:
[reaction: see text] Chemical glycopeptide synthesis requires access to gram quantities of glycosylated amino acid building blocks. Hence, the efficiency of synthesis of such building blocks is of great importance. Here, we report a fast and highly efficient synthetic route to Fmoc-protected asparaginyl glycosides from unprotected sugars in three steps with high yields. The glycosylated amino acids were successfully incorporated into target glycopeptides 7 and 8 by standard Fmoc **solid-phase** peptide synthesis.

CONTROLLED TERM: Amination
*Amino Acids: CH, chemistry
***Glycopeptides: CS, chemical synthesis**
Glycosylation
Microwaves
Molecular Structure

Research Support, Non-U.S. Gov't
Stereoisomerism
CHEMICAL NAME: 0 (Amino Acids); 0 (Glycopeptides)

L87 ANSWER 3 OF 26 MEDLINE on STN
ACCESSION NUMBER: 2003248058 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12769696
TITLE: Microwave-assisted **solid-phase** synthesis (MASS): parallel and combinatorial chemical library synthesis.
AUTHOR: Al-Obeidi Fahad; Austin Richard E; Okonya John F; Bond Daniel R S
CORPORATE SOURCE: Aventis Combinatorial Technologies Center (formerly Selectide), 1580 E. Hanley Blvd, Tucson, AZ 85737, USA.. Fahad.Al-Obeidi@Aventis.com
SOURCE: Mini reviews in medicinal chemistry, (2003 Aug) 3 (5) 449-60. Ref: 40
Journal code: 101094212. ISSN: 1389-5575.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200402
ENTRY DATE: Entered STN: 20030529
Last Updated on STN: 20040218
Entered Medline: 20040217
ABSTRACT:
The use of microwave technology in **solid-phase** organic synthesis has attracted much attention in recent years. The combination of ***solid*** **support**, either as a medium for chemical synthesis or as a carrier for organic reagents, with microwave heating offers several advantages over conventional techniques. Rapid and elevated heating of reaction mixtures can induce the completion of chemical transformations in minutes while several hours or days may be required for the same chemistry under conventional conditions. With decreased time of exposure to high temperatures and lessened thermal degradation, microwave accelerated chemistries often deliver products of higher purity when compared to conventional heating techniques. Several chemical syntheses on **solid-phase** employing microwave irradiation have been reported in the literature. The reagents, solvents, and equipment selected for microwave-mediated synthesis are important contributors to the success of the chemical transformation. Owing to the timesavings in performing chemical synthesis under microwave irradiation, the technique has become an emerging partner in **solid-phase** organic synthesis.
CONTROLLED TERM: *Combinatorial Chemistry Techniques: MT, methods
Esters: CS, chemical synthesis
Esters: CH, chemistry
Metals: CH, chemistry
***Microwaves**
Molecular Structure
Peptides: CS, chemical synthesis
Peptides: CH, chemistry
CHEMICAL NAME: 0 (Esters); 0 (Metals); 0 (Peptides)

L87 ANSWER 4 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2005:257387 CAPLUS
DOCUMENT NUMBER: 142:482304
TITLE: Application of **Microwave** Irradiation to the Synthesis of 14-Helical β-Peptides
AUTHOR(S): Murray, Justin K.; Gellman, Samuel H.
CORPORATE SOURCE: Department of Chemistry, University of Wisconsin, Madison, WI, 53706, USA
SOURCE: Organic Letters (2005), 7(8), 1517-1520
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 25 Mar 2005
AB The authors have evaluated the effects of microwave irradiation on the solid-phase synthesis of β-peptides. Sequences designed to adopt the 14-helix, especially those containing the structure-promoting residue trans-2-aminocyclohexanecarboxylic acid (ACHC), suffer from poor synthetic efficiency under standard SPPS conditions. A comparison of microwave and conventional heating showed that both provide excellent synthetic results for shorter sequences; however, the authors have identified a clear benefit from microwave irradiation for longer β-peptides.
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST helical beta peptide **solid phase** synthesis **microwave** irradn
IT **Microwave**
(irradiation; preparation of trans-aminocyclohexanecarboxylate-containing helical
β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT **Solid phase** synthesis
(peptide; preparation of trans-aminocyclohexanecarboxylate-containing helical
β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT Helix (conformation)
(preparation of trans-aminocyclohexanecarboxylate-containing helical β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(β-; preparation of trans-aminocyclohexanecarboxylate-containing helical β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT 851913-77-4P 851913-78-5P 851913-79-6P 851913-80-9P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of trans-aminocyclohexanecarboxylate-containing helical β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT 312965-07-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of trans-aminocyclohexanecarboxylate-containing helical β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
IT 851913-73-0P 851913-74-1P 851913-75-2P 851913-76-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of trans-aminocyclohexanecarboxylate-containing helical β-peptides via **solid-phase** peptide synthesis and **microwave** irradiation)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 5 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2004:74770 CAPLUS
DOCUMENT NUMBER: 140:287697
TITLE: An efficient approach for monosulfide bridge formation in **solid-phase** peptide synthesis
AUTHOR(S): Campiglia, Pietro; Gomez-Monterrey, Isabel; Longobardo, Luigi; Lama, Teresa; Novellino, Ettore; Grieco, Paolo
CORPORATE SOURCE: Dipartimento di Chimica Farmaceutica e Tossicologica, University of Naples "Federico II", Naples, 80131, Italy
SOURCE: Tetrahedron Letters (2004), 45(7), 1453-1456
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:287697
ED Entered STN: 30 Jan 2004
AB An efficient approach for the synthesis of cyclic peptides containing unnatural thioether side-chain bridges, based on the use of (2S)-9-fluorenylmethyl-2-[(tert-butoxycarbonyl)amino]-4-iodobutanoate and its homolog 5-iodopentanoate, derived from Boc-L-Asp-OFm and Boc-L-Glu-OFm (Boc = tert-butoxycarbonyl, Fm = 9-fluorenylmethyl), resp., is reported. The synthesis was performed by a tandem combination of solid-phase peptide synthesis and microwave-assisted cyclization strategy.
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 28
ST urotensin II analog cyclic peptide thioether **solid phase** synthesis; **solid phase** peptide synthesis thioalkylation iodobutanoate iodopentanoate macrocyclization **microwave**
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(cyclic; preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)
IT **Solid phase** synthesis
(peptide; preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)
IT Macrocyclization
Microwave
(preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)
IT Alkylation
(thio-; preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)
IT 7553-56-2, Iodine, reactions 129046-87-3 133906-29-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)
IT 675609-86-6P 675609-87-7P 675609-88-8P 675609-89-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of cyclic peptides by combination of **solid-**

phase peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)

IT 675609-84-4P 675609-85-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclic peptides by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)

IT 251293-28-4DP, Urotensin-II, analogs
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of urotensin-II analogs by combination of **solid-phase** peptide synthesis, thioalkylation with iodobutanoate, or iodopentanoate, and **microwave**-assisted macrocyclization)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 6 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2003:917219 CAPLUS
DOCUMENT NUMBER: 140:164209
TITLE: Rapid and efficient methodology to perform macrocyclization reactions in **solid-phase** peptide chemistry
AUTHOR(S): Grieco, Paolo; Campiglia, Pietro; Gomez-monterrey, Isabel; Lama, Teresa; Novellino, Ettore
CORPORATE SOURCE: Dipartimento di Chimica Farmaceutica e Tossicologica, University of Naples "Federico II", Naples, 80131, Italy
SOURCE: Synlett (2003), (14), 2216-2218
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 24 Nov 2003
AB A modification of classical solid phase peptide synthesis methodol. under microwave irradiation was investigated. To illustrate the synthetic method a number of Urotensin-II analogs containing 2-fluoro-5-nitrobenzoic acid were prepared A clear improvement in yield and reaction time using microwave heating in comparison with conventional thermal heating were observed
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST cyclic peptide one pot **solid phase** macrocyclization **microwave** irradn
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(cyclic; preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)
IT **Microwave**
(irradiation; preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)
IT **Solid phase** synthesis
(peptide; preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)
IT Macrocyclization
(preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)
IT Macrocyclic compounds
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)
IT 655230-40-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)

IT 251293-28-4DP, Urotensin-II, analogs 655230-31-2P 655230-33-4P 655230-35-6P 655230-37-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclic peptides by one pot **solid phase** macrocyclization under **microwave** irradiation)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
ACCESSION NUMBER: 2002:674277 CAPLUS
DOCUMENT NUMBER: 138:14167
TITLE: Rapid **microwave**-assisted **solid phase** peptide synthesis
AUTHOR(S): Erdelyi, Mate; Gogoll, Adolf
CORPORATE SOURCE: Department of Organic Chemistry, Department of Medicinal Chemistry, Uppsala University, Uppsala, 751 21, Swed.
SOURCE: Synthesis (2002), (11), 1592-1596
CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:14167
ED Entered STN: 06 Sep 2002
AB A microwave-assisted, rapid solid phase peptide synthesis procedure is presented. It has been applied to the coupling of sterically hindered Fmoc-protected amino acids yielding di- and tripeptides. Optimized conditions for a variety of coupling reagents are reported. Peptides were obtained rapidly (1.5-20 min) and without racemization.
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST **solid phase** peptide synthesis **microwave** assisted; fluorenylmethoxycarbonyl protected sterically hindered amino acid coupling
IT Protective groups
((fluorenylmethoxy)carbonyl; **microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
IT **Microwave**
(irradiation; **microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
IT Coupling reaction
(**microwave**-assisted **solid phase** peptide synthesis by coupling of sterically hindered Fmoc-protected amino acids)
IT Steric hindrance
(**microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(**microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
IT **Solid phase** synthesis
(peptide; **microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
IT 35661-39-3 71989-23-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(**microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)

IT 126637-45-4P 477776-40-2P 477776-41-3P 477776-42-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**microwave**-assisted **solid phase** peptide synthesis from sterically hindered Fmoc-protected amino acids)
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 1992:572007 CAPLUS
DOCUMENT NUMBER: 117:172007
TITLE: Enhanced coupling efficiency in **solid-phase** peptide synthesis by **microwave** irradiation
AUTHOR(S): Yu, Hui Ming; Chen, Shui Tein; Wang, Kung Tsung
CORPORATE SOURCE: Inst. Biol. Chem., Acad. Sin., Taipei, 10098, Taiwan
SOURCE: Journal of Organic Chemistry (1992), 57(18), 4781-4
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 01 Nov 1992
AB Procedures have been developed for increasing coupling efficiency in solid-phase peptide synthesis by microwave irradiation using a kitchen microwave oven. A rate increase of at least 2-4 fold was observed For side-chain hindered amino acids or for peptides containing difficult-coupling sequences, the peptide bond formation can be finished within 4-6 min. Under the same irradiation conditions, the microwave induced rate enhancement is more significant using Fmoc-peptide fragments than using amino acid derivs. in peptide synthesis. No detectable racemization reaction was observed
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST Merrifield synthesis peptide **microwave** coupling; Merrifield synthesis peptide **microwave** coupling
IT **Microwave**
(for enhanced coupling efficiency in **solid-phase** peptide synthesis)
IT Merrifield synthesis
(of peptides, enhanced coupling efficiency by **microwave** irradiation in)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(preparation of, by **solid-phase** method, enhanced coupling efficiency by **microwave** irradiation in)
IT Amidation
(peptide coupling, in **solid-phase** peptide synthesis, **microwave** irradiation for enhancement of)
IT 66851-75-0P 142801-17-0P 142801-18-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by **solid-phase** method, enhanced coupling efficiency by **microwave** irradiation in)
IT 66851-75-0DP, resin-bound 142801-17-0DP, resin-bound 142801-18-1DP, resin-bound
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, enhanced coupling efficiency by **microwave** irradiation in)
IT 139928-77-1 139952-86-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(**solid-phase** peptide coupling of)
IT 142810-18-2 142810-19-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(**solid-phase** peptide coupling of, in presence of

microwaves)

L87 ANSWER 9 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:1001899 CAPLUS
DOCUMENT NUMBER: 140:236083
TITLE: Synthesis of methyleneaminodipeptides via ring opening of a 2-(t-butoxycarbonylmethyl)aziridine derivative
AUTHOR(S): Thierry, Josiane; Servajean, Vincent
CORPORATE SOURCE: Institut de Chimie des Substances Naturelles, CNRS, Gif-sur-Yvette, 91198, Fr.
SOURCE: Tetrahedron Letters (2004), 45(4), 821-823
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:236083
ED Entered STN: 24 Dec 2003
AB The reactivity of 2-(tert-butoxycarbonylmethyl)aziridine-1-carboxylic acid benzyl ester has been studied with various N-nucleophiles. The ring-opening reaction was always regioselective, the nucleophile attacking preferentially the less hindered carbon of the aziridine. The reaction was used to prepare a methyleneamino pseudodipeptide using the α-amine of a lysine ester. The solvent-free reaction of 2-(tert-butoxycarbonylmethyl)aziridine derivative with benzylamine under microwave activation on solid support gave the same result as the classical reaction but in a much shorter time and represents a significant improvement in the procedure.
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST methyleneamino pseudo peptide **solid phase** synthesis; aziridine butoxycarbonylmethyl deriv regioselective ring opening nucleophile amine lysine; benzylamine tertbutoxycarbonylmethylaziridine **microwave** activation solvent free **solid phase**
IT **Peptides, preparation**
RL: BYP (Byproduct); **SPN (Synthetic preparation)**; PREP (Preparation)
(pseudodipeptides; preparation of methyleneaminodipeptides via ring opening of aziridine derivative with nucleophiles)
IT **Microwave**
Solid phase synthesis
(solvent free reaction of tertbutoxycarbonylmethylaziridine derivative with benzylamine under **microwave** activation on **solid support**)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 10 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:1006789 CAPLUS
DOCUMENT NUMBER: 143:115762
TITLE: The use of **microwave** irradiation in peptide chemistry
AUTHOR(S): Grieco, Paolo
CORPORATE SOURCE: Department of Pharmaceutical and Toxicological Chemistry, University of Naples "Federico II", Naples, 80131, Italy
SOURCE: Chimica Oggi (2004), 22(7/8), 18-20
CODEN: CHOGDS; ISSN: 0392-839X
PUBLISHER: TeknoScienze
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
ED Entered STN: 23 Nov 2004

AB A review. Some examples of microwave-promoted reactions in synthesis of peptides and peptidomimetics are provided. These examples confirm that microwave irradiation combined with the peptide synthesis or solid-phase peptide chemical represents a powerful technique for accelerating the synthesis of peptides and peptidomimetics in a combinatorial chemical context.
CC 34-0 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22
ST review **microwave** irradn peptide peptidomimetic synthesis combinatorial chem
IT **Microwave**
(irradiation; **microwave** irradiation in peptide chemical)
IT Combinatorial chemistry
Peptidomimetics
(**microwave** irradiation in peptide chemical)
IT **Peptides, preparation**
RL: CPN (Combinatorial preparation); **SPN (Synthetic preparation)** ; CMBI (Combinatorial study); PREP (Preparation)
(**microwave** irradiation in peptide chemical)
IT **Solid phase** synthesis
(peptide; **microwave** irradiation in peptide chemical)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 11 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:190685 CAPLUS
DOCUMENT NUMBER: 139:53283
TITLE: A new, rapid, general procedure for the synthesis of organic molecules supported on methoxy-polyethylene glycol (MeOPEG) under **microwave** irradiation conditions
AUTHOR(S): Porcheddu, Andrea; Ruda, Gian Filippo; Sega, Alessandro; Taddei, Maurizio
CORPORATE SOURCE: Dipartimento di Chimica, Universita degli Studi di Sassari, Sassari, 07100, Italy
SOURCE: European Journal of Organic Chemistry (2003), (5), 907-912
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:53283
ED Entered STN: 11 Mar 2003
AB The procedure for the precipitation of mols. supported on MeOPEG (mol. mass 5000) and their purification by fractional crystallization has been made easier by use of microwave irradiation A correct choice of the solvent employed for reaction or purification (DME, THF, 1,2-dichlorobenzene, iPrOH, ethylene glycol) allows working with 10 g of MeOPEG-OH, dissolved in 100 mL of solvent, under microwave irradiation conditions and for crystallization to be induced just by removal of the reaction flask from the microwave oven. No addnl. precipitation solvents are needed, thus reducing the reaction times and the potential hazards of working with large amts. of flammable solvents. The syntheses of several peptides and of a tetrasubstituted pyridine are reported. Large amts. of MeOPEG-OH may be used in this procedure, and so polyethylene glycol assisted organic synthesis can be regarded as a valid preparative technique.
CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 22
ST **solid phase** peptide synthesis **microwave** irradn; pyridine substituted **solid phase** synthesis **microwave** benzyl alc linker
IT **Microwave**
(irradiation; **solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT **Solid phase** synthesis
(peptide; **solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(**solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT Linking agents
(**solid phase** syntheses of tetrasubstituted pyridine under **microwave** irradiation using prepared benzyl alc. linker)
IT 123-31-9, 4-Hydroxyphenol, reactions 1138-80-3 1142-20-7 1145-80-8 1148-11-4 1149-26-4 1161-13-3 1164-16-5 2018-66-8 2389-60-8 3160-59-6 4637-24-5 14205-39-1 32675-94-8 72531-41-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(**solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT 1138-80-3DP, resin-bound 72531-41-0DP, resin-bound 547751-94-0DP, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT 623-05-2DP, resin-bound
RL: RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
IT 75-75-2DP, Methanesulfonic acid, resin-bound 60117-24-0P 130029-71-9P 547751-91-7P 547751-92-8P 547751-93-9P 547751-95-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(**solid phase** syntheses of several peptides and of tetrasubstituted pyridine under **microwave** irradiation)
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:680515 CAPLUS
DOCUMENT NUMBER: 115:280515
TITLE: Enhancement of coupling reaction in peptide synthesis by **microwave** irradiation
AUTHOR(S): Wang, Kung Tsung; Chen, Shui Tein; Chiou, Shyh Horng
CORPORATE SOURCE: Inst. Biochem. Sci., Natl. Taiwan Univ., Taipei, Taiwan
SOURCE: Tech. Protein Chem. 2, [Pap. Annu. Symp. Protein Soc.], 4th (1991), Meeting Date 1990, 241-7. Editor(s): Villafranca, Joseph J. Academic: San Diego, Calif.
CODEN: 57IHA5
DOCUMENT TYPE: Conference
LANGUAGE: English
ED Entered STN: 27 Dec 1991
AB A symposium report on the enhancement of the peptide coupling reaction by microwave irradiation The microwave enhancement was applied to the liquid phase

synthesis of Moz-Val-Val-OMe [Moz = [(4-methoxyphenyl)methoxy]carbonyl] and the solid-phase synthesis of Tyr-Ile and Leu-Ala-Gly-Val.
CC 34-3 (Amino Acids, Peptides, and Proteins)
ST **microwave** enhancement peptide coupling symposium
IT **Microwave**
(enhancement by, of peptide coupling reaction)
IT Merrifield synthesis
(of peptides, **microwave** enhancement of coupling reactions in)
IT **Peptides, preparation**
RL: **SPN (Synthetic preparation)**; PREP (Preparation)
(preparation of, **microwave** enhancement of coupling reactions in)
IT Amidation
(peptide coupling, **microwave** enhancement of)
IT 40829-32-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by **solid-phase** method, **microwave** enhancement of coupling reaction in)
IT 17195-26-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by **solid-phase** method, **microwave** enhancement of coupling reactions in)
IT 137647-48-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, **microwave** enhancement of coupling reaction in)

L87 ANSWER 13 OF 26 DISSABS COPYRIGHT (C) 2005 ProQuest Information and Learning Company; All Rights Reserved on STN
ACCESSION NUMBER: 2005:662 DISSABS Order Number: AAIC817913 (not available for sale by UMI)
TITLE: Towards the development of photoswitchable beta-hairpin mimetics
AUTHOR: Erdelyi, Mate [Ph.D.]
CORPORATE SOURCE: Uppsala Universitet (Sweden) (0903)
SOURCE: Dissertation Abstracts International, (2004) Vol. 65, No. 4C, p. 1013. Order No.: AAIC817913 (not available for sale by UMI). Universitetstryckeriet, Uppsala, Sweden. 90 pages. ISBN: 91-554-5897-1.
DOCUMENT TYPE: Dissertation
FILE SEGMENT: DAI
LANGUAGE: English
ENTRY DATE: Entered STN: 20050128
Last Updated on STN: 20050128
ABSTRACT: **Peptide** secondary structure mimetics are important tools in medicinal chemistry, as they provide analogues of endogenous **peptides** with new physicochemical and pharmacological properties. The β-hairpin motif has been shown to be involved in numerous physiological processes, among others in regulation of eukaryotic gene transcription. This thesis addresses the design, synthesis and conformational analysis of photoswitchable β-hairpin mimetics.

The developmental work included the establishment of an improved procedure for cross coupling of aryl halides with terminal alkynes. **Microwave** mediated Sonogashira couplings in closed vessels were optimized under homogeneous and **solid-phase** conditions furnishing excellent yields for a large variety

of substrates within 5-25 minutes. In addition, **microwave** heating was shown not to have any non-conventional effect on the reaction rate.

Furthermore, the most important factors affecting β-hairpin stability were evaluated. Studies of **tetrapeptide** and **decapeptide** analogues revealed the essential role of the β-turn in initiation of hairpin folding. Moreover, hydrogen bonding was shown to be the main interchain stabilizing force, whereas hydrophobic interactions were found to be relatively weak. Nevertheless, hydrophobic packing appears to provide an important contribution to the thermodynamic stability of β-hairpins.

Photoswitchable peptidomimetics were prepared by incorporation of various stilbene moieties into tetra- and **decapeptides.** Synthesis, photochemical isomerisation and spectroscopic conformational analysis of the compounds were performed.

CLASSIFICATION: 0490 CHEMISTRY, ORGANIC; 0307 BIOLOGY, MOLECULAR

L87 ANSWER 14 OF 26 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2004277099 EMBASE
TITLE: Automation in medicinal chemistry.
AUTHOR: Reader J.C.
CORPORATE SOURCE: J.C. Reader, Millennium Pharma. Res./Devt. Ltd., Granta Park, Great Abington, Cambridge CB1 6ET, United Kingdom. john.reader@mpi.com
SOURCE: Current Topics in Medicinal Chemistry, (2004) Vol. 4, No. 7, pp. 671-686.
Refs: 105
ISSN: 1568-0266 CODEN: CTMCCL
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 20040715
Last Updated on STN: 20040715

ABSTRACT: The implementation of appropriate automation can make a significant improvement in productivity at each stage of the drug discovery process, if it is incorporated into an efficient overall process. Automated chemistry has evolved rapidly from the 'combinatorial' techniques implemented in many industrial laboratories in the early 1990's which focused primarily on the hit discovery phase, and were highly dependent on **solid-phase** techniques and instrumentation derived from peptide synthesis. Automated tools and strategies have been developed which can impact the hit discovery, hit expansion and lead optimization phases, not only in synthesis, but also in reaction optimization, work-up, and purification of compounds. This article discusses the implementation of some of these techniques, based especially on experiences at Millennium Pharmaceuticals Research and Development Ltd.

CONTROLLED TERM: Medical Descriptors:
*automation
*combinatorial chemistry
peptide analysis
peptide synthesis

solid phase extraction
instrumentation
reaction optimization
protein purification
high throughput screening
robotics
sensor
microwave radiation
computer program
liquid liquid extraction
device
reactor
evaporation
solvent effect
review
Drug Descriptors:
polypeptide
resin
urea
scavenger
thiophenol
polystyrene
copolymer

CAS REGISTRY NO.: (urea) 57-13-6; (thiophenol) 108-98-5; (polystyrene) 9003-53-6

NAME OF PRODUCT: (1) Zinsser Sophas; (2) CombiKits; (3) DryPette; (4) Redi; (5) StratoSpheres Plug; (6) SynPhase Lantern; (7) FlexChem; (8) FlexChem Hydra; (9) Calypso; (10) MiniBlocks; (11) Desyre; (12) Syncore system; (13) Variomag; (14) Myriad Core System; (15) Trident; (16) Ares reactor; (17) RAM Synthesizer; (18) Zymate XP; (19) Emrys Creator; (20) Emrys Optimizer; (21) Emrys Synthesizer; (22) Emrys Advancer; (23) Innogram; (24) Allex; (25) Lissy; (26) EZ-2; (27) Syncore Polyvap; (28) RapidVap; Cytos Lab System; Trident Library Synthesizer; AutoSort-10K; AccuTag-100; Synthesis Manager; Teflon; Irori microkans; Many-to-Many; One-to-One; Lipos system; ArgoScoop; Argonaut Nautilus

COMPANY NAME: (2) Sigma Aldrich; (5) Millennium Pharmaceuticals; (6) Mimotopes; (8) Robbins; (9) Charybdis Technologies; (13) HP Labortechnik; (15) Argonaut Technologies; (16) Advanced Chem Tech; (18) Zymark; (22) Personal Chemistry; (23) Innolabtech; (24) Mettler Toledo; (25) Zinsser Analytic; (26) Genevac; (27) Buchi; (28) Labconco; Vanguard; Radleys Discovery Technologies; CEM Corporation; Hamilton; Gilson; Savant Instruments

L87 ANSWER 15 OF 26 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
on STN DUPLICATE 7

ACCESSION NUMBER: 2000-0082345 PASCAL

TITLE (IN ENGLISH): Microwave-assisted spectrophotometric estimation of polymer-supported functional groups using a universal reagent

AUTHOR: RAO N. S.; AGARWAL S. K.; CHAUHAN V. K.; BHATIA D.; SHARMA A. K.; KUMAR P.; GARG B. S.; GUPTA K. C.

CORPORATE SOURCE: Nucleic Acids Research Laboratory, Centre for Biochemical Technology, Mall Road, Delhi University Campus, Delhi 110 007, India; Department of Chemistry, Delhi University, Delhi 110 007, India

SOURCE: Analytica chimica acta, (2000), 405(1-2), 247-254, 20 refs.
ISSN: 0003-2670 CODEN: ACACAM
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: Netherlands
LANGUAGE: English
AVAILABILITY: INIST-3950, 354000081442310320
ABSTRACT: A rapid method has been developed for the estimation of polymer-supported functionalities under **microwave** irradiation. The method involves the use of a novel universal reagent, S-(4,4'-dimethoxytrityl)-3-mercaptopropionic acid (DMPA) for the estimation of polymer-supported hydroxyalkyl, aminoalkyl and mercaptoalkyl functionalities in the presence of triphenylphosphine-bromotrichloromethane (TPP-BTCM) as an oxidation-reduction coupling reagent. The loadings obtained on the supports following the proposed method were found to be comparable with those obtained with the standard, 4,4'-dimethoxytrityl chloride (DMTr-Cl), method. The usefulness of the method was further demonstrated by monitoring the functionalization of polymer **supports**, suitable for **solid-phase** **peptide** and oligonucleotide **synthesis** .
CLASSIFICATION CODE: 001C04A; Chemistry; Analytical chemistry
001D09D04I; Applied sciences; Physicochemistry of polymers, Macromolecular chemistry, Materials science; Organic polymers
CONTROLLED TERM: Polymer; Reaction support; Peptide synthesis; Solid state reaction; Analysis method; Quantitative analysis; Functional group; Amino group; Thiohydroxyl group; Hydroxyl group; Redox titration; Mercaptoacid; Microwave irradiation; Spectrophotometry; Experimental study

L87 ANSWER 16 OF 26 on STN Elsevier BIOBASE COPYRIGHT 2005 Elsevier Science B.V.
ACCESSION NUMBER: 2004136143 ESBIOBASE
TITLE: Microwave-supported preparation of .sup.6.sup.8Ga bioconjugates with high specific radioactivity
AUTHOR: Velikyan I.; Beyer G.J.; Langstrom B.
CORPORATE SOURCE: B. Langstrom, Uppsala Imanet, P.O. Box 967, SE-751 09 Uppsala, Sweden.
E-mail: Bengt.Langstrom@Uppsala.Imanet.se
SOURCE: Bioconjugate Chemistry, (2004), 15/3 (554-560), 9 reference(s)
CODEN: BCCHES ISSN: 1043-1802
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: The generator-produced positron-emitting .sup.6.sup.8Ga (T.sub.1.sub./.sub.2 = 68 min) is of potential interest for clinical PET. .sup.6.sup.8Ga as a metallic cation is suitable for complexation reactions with chelators, naked or conjugated, with peptides or other macromolecules. Large .sup.6.sup.8Ga generator eluate volumes, metal traces from the

generator **column** material, or reaction reagents, however, disturb a fast, reliable, and quantitative labeling procedure. In this paper we describe a simple technique, based on anion exchange, aiming first, to increase the .sup.6.sup.8Ga concentration, second to purify it from competing impurities, and third to obtain a fast and quantitative .sup.6.sup.8Ga-labeled peptide conjugate that can be applied in humans without further purification. Within 5 min one can obtain from the original 6 mL generator eluate a 200 μL .sup.6.sup.8Ga preparation (volume reduction by a factor 30) that is suitable for direct and quantitative labeling of peptide conjugates. DOTATOC (DOTA-D-Phe.sup.1-Tyr .sup.3-octreotide, DOTA = 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid) was used as a test tracer for comparing the labeling properties of the different .sup.6.sup.8Ga **preparations.** In combination with **microwave** heating, **peptide** conjugates of 0. 5-1 nmol quantities could be labeled within 10 min with the full .sup.6.sup.8Ga activity of a generator. Further purification of the .sup.6.sup.8Ga-labeled peptide conjugate was no longer required since the nuclide incorporation was quantitative. The specific radioactivity (with respect to the peptide) was improved by a factor .apprx.100 compared to the previously applied techniques using the original generator eluate. The commercial .sup.6.sup.8Ge/.sup.6.sup.8Ga generator from Obninsk in combination with this system for purification and concentration with an integrated **microwave** -supported labeling technology resulted in a kitlike technology for .sup.6.sup.8Ga-tracer production. The first automated prototype using this technology is being tested.

CLASSIFICATION CODE: 99 General

L87 ANSWER 17 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN DUPLICATE 4

ACCESSION NUMBER: 2003:365415 BIOSIS
DOCUMENT NUMBER: PREV200300365415
TITLE: Rapid **microwave**-assisted **solid phase peptide synthesis.**
AUTHOR(S): Erdelyi, M. [Reprint Author]; Gogoll, A. [Reprint Author]
CORPORATE SOURCE: Dept. of Organic Chemistry, Uppsala University, S-75 123, Box 599, Uppsala, Sweden
SOURCE: Biopolymers, (2003) Vol. 71, No. 3, pp. 340. print.
Meeting Info.: 18th American Peptide Symposium on Peptide Revolution: Genomics, Proteomics and Therapeutics. Boston, MA, USA. July 19-23, 2003. American Peptide Society.
ISSN: 0006-3525 (ISSN print).
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003
CONCEPT CODE: General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - General 10060

Biochemistry studies - Proteins, peptides and amino acids 10064
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Methods and Techniques
INDEX TERMS: Chemicals & Biochemicals
amino acids; coupling reagents; peptide: synthesis
INDEX TERMS: Methods & Equipment
rapid **microwave**-assisted **solid phase peptide synthesis**: laboratory techniques
INDEX TERMS: Miscellaneous Descriptors
coupling conditions; temperature

L87 ANSWER 18 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1989:110037 BIOSIS
DOCUMENT NUMBER: PREV198936055453; BR36:55453
TITLE: DETERMINATION OF AMINO ACIDS ON MERRIFIELD **RESIN** BY MICROWAVE HYDROLYSIS.
AUTHOR(S): YU H-M [Reprint author]; CHEN S-T; CHIOU S-H; WANG K-T
CORPORATE SOURCE: INST BIOCHEM SCI, NATL TAIWAN UNIV, ACADEMIA SINICA, PO BOX 23-206, TAIPEI
SOURCE: Journal of Chromatography, (1988) Vol. 456, No. 2, pp. 357-362.
DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 21 Feb 1989
Last Updated on STN: 21 Feb 1989
CONCEPT CODE: Radiation biology - Radiation and isotope techniques 06504
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biophysics - Methods and techniques 10504
Biophysics - Molecular properties and macromolecules 10506
INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics
INDEX TERMS: Miscellaneous Descriptors
PROTEIN ANALYSIS **PEPTIDE SYNTHESIS** **MICROWAVE** TECHNIQUE

L87 ANSWER 19 OF 26 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 97:92404 LIFESCI
TITLE: Chemical synthesis of biologically active snake venom
AUTHOR: Wang, K.-T.
CORPORATE SOURCE: Inst. Biol. Chem., Academia Sinica, 128 Yan-Chiu-Yuan Rd., Sec II, Taipei 11529, Taiwan
SOURCE: (1996) pp. 83-88. INST. BIOL. CHEM., ACADEMIA SINICA AND TFRI. TAIPEI (TAIWAN, R.O.C.).
Meeting Info.: Czech-Taiwan (R.O.C.) Symp. on Biotechnology Prague (Czech Republic). 5-8 Jun 1995.
ISBN: 957-671-441-9.
DOCUMENT TYPE: Book
TREATMENT CODE: Conference
FILE SEGMENT: X
LANGUAGE: English

SUMMARY LANGUAGE: English
ABSTRACT: Chemical synthesis plays a very important role in **preparation** of various interested **peptides** and proteins in modern protein researches. In this report, we had synthesized some biologically active snake toxins and toxin analogues ranging from 22- to 60-residue by **solid phase peptide synthesis** for studying the structure/function relationships of snake toxins. Besides, we had developed a **microwave** irradiation method for rapid formation of **peptide**-bond in the **peptide synthesis.** Finally, we attempt to **synthesize** the larger snake toxins over 100-residue such as phospholipase A sub(2) (PLA sub(2)) by some novel chemical methods, including **microwave** irradiation and chemical ligation, in the near future.
CLASSIFICATION: 24173 Animals
UNCONTROLLED TERM: venom; Serpentes; proteins; toxins; peptide bonds; phospholipase A2; microwave radiation

L87 ANSWER 20 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:704182 SCISEARCH
THE GENUINE ARTICLE: 939YC
TITLE: MW-Enhanced high-speed **deprotection** of boc group using p-TsOH and concommitant formation of N-Me-amino acid benzyl ester p-TsOH salts
AUTHOR: Babu V V S (Reprint); Patil B S; Vasanthakumar G R
CORPORATE SOURCE: Bangalore Univ, Dept Studies Chem, Cent Coll Campus, Dr BR Ambedkar Veedhi, Bangalore 560001, Karnataka, India (Reprint); Bangalore Univ, Dept Studies Chem, Bangalore 560001, Karnataka, India
hariccb@rediffmail.com
COUNTRY OF AUTHOR: India
SOURCE: SYNTHETIC COMMUNICATIONS, (2005) Vol. 35, No. 13, pp. 1795-1802.
ISSN: 0039-7911.
PUBLISHER: TAYLOR & FRANCIS INC, 325 CHESTNUT ST, SUITE 800, PHILADELPHIA, PA 19106 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 29
ENTRY DATE: Entered STN: 15 Jul 2005
Last Updated on STN: 15 Jul 2005
ABSTRACT:
A high-speed, complete **deprotection** of Boc group from Boc amino acids and **protected peptide** esters employing p-TsOH in toluene under **microwave** irradiation is found to be complete in 30 s. The **deprotection** can be carried out in methanol and acetonitrile also. Under the present conditions, C-**peptide** benzyl esters and O-benzyl ethers have been found to be stable. This has permitted us to carry out the synthesis of [Leu] enkephalin employing the Boc/Bzl-group strategy. Further more, it has been found that both N-alpha-Fmoc and N-alpha-Z groups are completely stable. The present conditions can be extended for the concomitant removal of the Boc group and the formation of C-benzyl amino acid esters as well. This has been utilized for the synthesis of N-Me amino acid benzyl esters starting from Boc-N-Me amino acids in a single step.
CATEGORY: CHEMISTRY, ORGANIC
SUPPLEMENTARY TERM: Boc group; **deprotection**; **microwave** irradiation; N-Me amino acid benzyl esters

SUPPL. TERM PLUS: PHASE **PEPTIDE**-SYNTHESIS; BUTYLOXYCARBONYL **PROTECTING** GROUP; **SOLID-PHASE**; **MICROWAVE** IRRADIATION; BUTOXYCARBONYL GROUP; SELECTIVE CLEAVAGE; FACILE SYNTHESIS; TERT-BUTYL; REMOVAL; CYCLOSPORINE

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
AKAJI K	1999	64	405	J ORG CHEM
ATHERTON E	1978		537	J CHEM SOC CHEM COMM
BOSE D S	1998	39	5631	TETRAHEDRON LETT
BRINKMAN H R	1991	21	459	SYNTHETIC COMMUN
CHAUVETTE R R	1971	36	1259	J ORG CHEM
COSTE J	1994	59	2437	J ORG CHEM
DAGA M C	2001	42	5191	TETRAHEDRON LETT
DAS S K	2004		915	SYNLETT 0506
FUJII N	1987		274	J CHEM SOC CHEM COMM
GOODACRE J	1975		3609	TETRAHEDRON LETT
GREENE T W	1999			PROTECTIVE GROUPS OR
HISKEY R G	1971	36	488	J ORG CHEM
KAISER E	1988	29	303	TETRAHEDRON LETT
KIMURA T	1981	20	1823	BIOPOLYMERS
LI P	2000	56	8119	TETRAHEDRON
LINDSTROM P	2001	57	9225	TETRAHEDRON
LOTT R S	1979		95	J CHEM SOC CHEM COMM
MERRIFIELD R B	1964	3	1385	BIOCHEMISTRY-US
PAUL S	2001	42	3827	TETRAHEDRON LETT
PODLECH J	2002	22	86	METHODS ORGANIC CH A
SIVANANDAIAH K M	1996	37	5989	TETRAHEDRON LETT
SUZUKI K	1978	26	2198	CHEM PHARM BULL
VARMA R S			221	GREEN CHEM CHALLENGI
VASANTHAKUMAR G R	2002	9	207	LETT PEPT SCI
WANG S S	1977	42	1286	J ORG CHEM
WENGER R M	1983	66	2672	HELV CHIM ACTA
WENGER R M	1985	24	77	ANGEW CHEM INT EDIT
YAJIMA H	1977	25	740	CHEM PHARM BULL
ZHANG A J	1998	39	7439	TETRAHEDRON LETT

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ACCESSION NUMBER: 2005:254046 SCISEARCH

THE GENUINE ARTICLE: 901PQ

TITLE: A reactivity test for HBTU-activated carboxylic acids with low reactivity and competitive coupling of N-methylpyrrole derivatives

AUTHOR: Ernst T; Richert C (Reprint)

CORPORATE SOURCE: Univ Karlsruhe TH, Inst Organ Chem, D-76131 Karlsruhe, Germany (Reprint)
cr@rrg.uka.de

COUNTRY OF AUTHOR: Germany

SOURCE: SYNLETT, (16 FEB 2005) No. 3, pp. 411-416.
ISSN: 0936-5214.

PUBLISHER: GEORG THIEME VERLAG KG, RUDIGERSTR 14, D-70469 STUTTGART, GERMANY.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 33

ENTRY DATE: Entered STN: 10 Mar 2005
Last Updated on STN: 10 Mar 2005

ABSTRACT:
N-Methylpyrrole carboxylic acids are building blocks for oligopyrroleamides that bind DNA duplexes via the minor groove. The reactivity of HBTU-based active esters of four methylpyrroles in amide-forming reactions was determined. When assayed against HBTU-activated N-acetylleucine, a 6-250-fold lower reactivity was found. When assayed against the NHS ester of Boc-valine, the reactivity was up to 4-fold lower. Despite large differences in reactivity, mixed couplings were successfully performed with all four pyrroles, generating small libraries of modified oligonucleotides suitable for spectrometrically monitored selection experiments. **Microwave** irradiation accelerated coupling of an Fmoc-**protected** pyrrole to an amine on **solid** ***support.***

CATEGORY: CHEMISTRY, ORGANIC
SUPPLEMENTARY TERM: DNA; pyrroles; amides; combinatorial chemistry; **solid-phase** synthesis
SUPPL. TERM PLUS: **SOLID-PHASE** SYNTHESIS; MINOR-GROOVE BINDING; TERMINAL BASE-PAIRS; MASS-SPECTROMETRY; COMBINATORIAL CHEMISTRY; COMPREHENSIVE SURVEY; MONITORED SELECTION; **PEPTIDE** LIBRARIES; AMINO-ACIDS; DNA

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ALTMAN R K	1999	1	493	J COMB CHEM
BAILLY C	1998	9	513	BIOCONJUGATE CHEM
BAIRD E E	1996	118	6141	J AM CHEM SOC
BALDINO C M	2000	2	89	J COMB CHEM
BERLIN K	1997	4	63	CHEM BIOL
BOGER D L	2000	122	6382	J AM CHEM SOC
BUGAUT A	2004	43	3144	ANGEW CHEM INT EDIT
BUGAUT A	2004	116	3206	ANGEW CHEM
CONNORS W H	2003	5	247	ORG LETT
DOGAN Z	2004	126	4762	J AM CHEM SOC
DOLLE R E	2003	5	693	J COMB CHEM
DOMBI K L	2000	5	1265	MOLECULES
DOMBI K L	2003	5	45	J COMB CHEM
GALLMEIER H C	2003		3473	EUR J ORG CHEM 0915
GAO J M	1996	39	1949	J MED CHEM
HALL D G	2001	3	125	J COMB CHEM
KIELKOPF C L	1998	282	111	SCIENCE
LOWN J W	1985	50	3774	J ORG CHEM
LUKHTANOV E A	1997	119	6214	J AM CHEM SOC
MOKHIR A A	2001	3	374	J COMB CHEM
NARAYANAN S	2004	32	2901	NUCLEIC ACIDS RES
NEELEY W L	2004	6	245	ORG LETT
ROBLES J	1996	118	5820	J AM CHEM SOC
SARVER A	2001	12	439	J AM SOC MASS SPECTR
SCHMID D G	2001	71	149	BIOTECHNOL BIOENG CO
SCHREIBER S L	2000	287	1964	SCIENCE
SCHWOPE I	1999	64	4749	J ORG CHEM
SHAPIRO M J	2001	71	130	BIOTECHNOL BIOENG
SINYAKOV A N	1995	117	4995	J AM CHEM SOC
SZEWCZYK J W	1996	35	1487	ANGEW CHEM INT EDIT
TUMA J	2004	43	15680	BIOCHEMISTRY-US
WURTZ N R	2001	3	1201	ORG LETT
YOUNGQUIST R S	1995	117	3900	J AM CHEM SOC

L87 ANSWER 22 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:1071903 SCISEARCH

THE GENUINE ARTICLE: 876EO
TITLE: Fluorous tagging strategy for solution-phase synthesis of small molecules, **peptides** and oligosaccharides
AUTHOR: Zhang W (Reprint)
CORPORATE SOURCE: Univ Pittsburgh, Appl Res Ctr, Flurous Technol Inc, 970 William Pitt Way, Pittsburgh, PA 15238 USA (Reprint); Univ Pittsburgh, Appl Res Ctr, Flurous Technol Inc, Pittsburgh, PA 15238 USA
w.zhang@fluorous.com
COUNTRY OF AUTHOR: USA
SOURCE: CURRENT OPINION IN DRUG DISCOVERY & DEVELOPMENT, (NOV 2004) Vol. 7, No. 6, pp. 784-797.
ISSN: 1367-6733.
PUBLISHER: THOMSON SCIENTIFIC, 34-42 CLEVELAND STREET, LONDON, W1T 4JE, ENGLAND.
DOCUMENT TYPE: General Review; Journal
LANGUAGE: English
REFERENCE COUNT: 45
ENTRY DATE: Entered STN: 6 Jan 2005
Last Updated on STN: 6 Jan 2005

ABSTRACT:
The purification of reaction mixtures is a slow process in organic synthesis, especially during the production of large numbers of analogs and compound libraries. Phase-tag methods such as solidphase synthesis and fluorous synthesis, provide efficient ways of addressing the separation issue. Fluorous synthesis employs functionalized perfluoroalkyl groups attached to substrates or reagents. The separation of the resulting fluorous molecules can be achieved using strong and selective fluorous liquid-liquid extraction, fluorous silica gel-based **solid-phase** extraction or high-performance liquid chromatography Fluorous technology is a novel solution-phase method, which has the advantages of fast reaction times in homogeneous environments, being readily adaptable to literature conditions, having easy intermediate analysis, and having flexibility in reaction scale and scope. In principle, any synthetic methods that use a **solid-** ***support*** could be conducted in solution-phase by replacing the polymer linker with a corresponding fluorous tag. This review summarizes the progress of fluorous tags in solution-phase synthesis of small molecules, ***peptides*** and oligosaccharides.

CATEGORY: PHARMACOLOGY & PHARMACY
SUPPLEMENTARY TERM: fluorous tag; high throughput; oligosaccharide; **microwave**; **peptide**; solution-phase; synthesis
SUPPL. TERM PLUS: **PROTECTING** GROUP; ORGANIC-SYNTHESIS; **SOLID-PHASE**; PARALLEL SYNTHESIS; MIXTURE SYNTHESIS; AMINO-ACIDS; PURIFICATION; LIBRARY; TAG; SEPARATIONS

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
CHEN C H T	2003	5	1015	ORG LETT
CIOFFI C L	2004		841	SYNLETT 0403
CURRAN D P	2001		1488	SYNLETT SEP
CURRAN D P	2000	72	1649	PURE APPL CHEM
CURRAN D P	2002	4	2233	ORG LETT
CURRAN D P	1998	37	1175	ANGEW CHEM INT EDIT
CURRAN D P	1998	39	4937	TETRAHEDRON LETT
CURRAN D P	2003	68	4643	J ORG CHEM
DEVISSER P C	2003	44	9013	TETRAHEDRON LETT
FILIPPOV D V	2002	43	7809	TETRAHEDRON LETT

GLADYSZ J A	2004			HDB FLUOROUS CHEM
HORVATH I T	1998	31	641	ACCOUNTS CHEM RES
JING Y Q	2004	45	4615	TETRAHEDRON LETT
LEY S V	2000		3815	J CHEM SOC PERK T 1
LU Y	2004			IN PRESS QSAR COMB S
LUO Z Y	2001	66	4261	J ORG CHEM
MAZONI L	2003		2930	CHEM COMMUN
MIURA T	2004	69	5348	J ORG CHEM
MIURA T	2003	42	2047	ANGEW CHEM INT EDIT
MIZUNO M	2003		972	CHEM COMMUN
MIZUNO M	2004	45	3425	TETRAHEDRON LETT
MONTANARI V	2004	126	9528	J AM CHEM SOC
NAGASHIMA T	2004	6	942	J COMB CHEM
PALMACCI E R	2001	40	4433	ANGEW CHEM INT EDIT
PARDO J	2001	3	3711	ORG LETT
READ R W	2003	44	7045	TETRAHEDRON LETT
ROVER S	1999	40	5667	TETRAHEDRON LETT
SCHWINN D	2002	85	255	HELV CHIM ACTA
SCHWINN D	2003	86	188	HELV CHIM ACTA
STUDER A	1997	53	6681	TETRAHEDRON
STUDER A	1997	62	2917	J ORG CHEM
VILLARD A L	2004	6	611	J COMB CHEM
WIPF P	1999	40	5139	TETRAHEDRON LETT
WIPF P	1999	1	1253	ORG LETT
WIPF P	1999	40	4649	TETRAHEDRON LETT
YOSHIDA J	2002	102	3693	CHEM REV
ZHANG W	2003	5	2555	ORG LETT
ZHANG W	2004	104	2531	CHEM REV
ZHANG W	2003	5	1011	ORG LETT
ZHANG W	2004	45	6757	TETRAHEDRON LETT
ZHANG W	2003	7	199	MOL DIVERS
ZHANG W	2003	59	4475	TETRAHEDRON
ZHANG W	2004	6	1473	ORG LETT
ZHANG W	2004	45	4611	TETRAHEDRON LETT
ZHANG W	2004		101	ARKIVOC 1

L87 ANSWER 23 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:806040 SCISEARCH
THE GENUINE ARTICLE: 721XF
TITLE: Isocyanates of N-alpha-[(9-fluorenylmethyl)oxy]carbonyl amino acids: Synthesis, isolation, characterization, and application to the efficient synthesis of urea peptidomimetics
AUTHOR: Patil B S; Vasanthakumar G R; Babu V V S (Reprint)
CORPORATE SOURCE: Bangalore Univ, Dept Studies Chem, Cent Coll Campus, Dr BR Ambedkar Veedhi, Bangalore 560001, Karnataka, India (Reprint); Bangalore Univ, Dept Studies Chem, Bangalore 560001, Karnataka, India
COUNTRY OF AUTHOR: India
SOURCE: JOURNAL OF ORGANIC CHEMISTRY, (19 SEP 2003) Vol. 68, No. 19, pp. 7274-7280.
ISSN: 0022-3263.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 51
ENTRY DATE: Entered STN: 3 Oct 2003
Last Updated on STN: 3 Oct 2003

ABSTRACT:
The Curtius rearrangement of Fmoc-amino acid azides 1 was carried out in toluene by refluxing the solution for 30 min. The resulting isocyanates 2 have been isolated as crystalline solids and are fully characterized by IR, H-1 NMR, C-13 NMR, and mass spectra. They are found to be stable for several months when stored at 4 degreesC. The acyl azides of Asp, Glu, Ser, Tyr, and Lys with side-chain **protection** having tert-butyl, benzyl, and Boc groups were also converted to the corresponding isocyanates 2h-m. The rearrangement of Fmoc-amino acid azides in toluene to isocyanates 2 under ***microwave*** irradiation was also accomplished. The direct exposure of solid azides to **microwaves** for 60 s led to the completion of the rearrangement. The resulting isocyanates, after recrystallization, were found to be analytically pure. The scale-up of the rearrangement, under ***microwave*** irradiation as tested up to 0.75 mol, posed no problems and led to the isolation of the isocyanates in 91-96% yield. The utility of isocyanates as building blocks in the synthesis of urea **peptides** 4 is demonstrated. Further, the coupling of isocyantes 2 directly with N,O-bis(trimethylsilyl) derivatives of amino acids 6 resulted in urea ***peptide*** acids 7 with good yield in high purity. Thus, the synthesis of urea **peptide** acids 7d-g containing Asp, Glu, Ser, and Tyr with a free side-chain functional group have been carried out.

CATEGORY: CHEMISTRY, ORGANIC
SUPPL. TERM PLUS: **SOLID-PHASE** SYNTHESIS; ARTIFICIAL BETA-SHEETS; FREE ORGANIC-SYNTHESIS; MOLECULAR SCAFFOLDS; OLIGOUREA PEPTIDOMIMETICS; PROTEASE INHIBITORS; **PEPTIDE**-SYNTHESIS; FMOC; DERIVATIVES; CHEMISTRY

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Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ABRAMOVITCH R A	1991	23	683	ORG PREP P INT
ADAMIAK R W	1977		1935	J TETRAHEDRON LETT
ADAMIAK R W	1977		1935	TETRAHEDRON LETT
BABU V V S	2000		4328	J CHEM SOC PERK T 1
BAMBINO F	1991	32	3407	TETRAHEDRON LETT
BOEIJEN A	2001	66	8454	J ORG CHEM
BOEIJEN A	1999		2127	EUR J ORG CHEM SEP
BOLIN D R	1989	33	353	INT J PEPT PROT RES
BURGESS K	1995	34	907	ANGEW CHEM INT EDIT
BURGESS K	1997	119	1556	J AM CHEM SOC
CADDICK S	1995	51	10403	TETRAHEDRON
CARPINO L A	1996	29	268	ACCOUNTS CHEM RES
CASTRO J L	1996	39	842	J MED CHEM
CHOREV M	1993	26	266	ACCOUNTS CHEM RES
DATTA A S	1975		1712	J CHEM SOC P1
DESHAYES S	1999	55	10851	TETRAHEDRON
FLETCHER M D	1998	98	763	CHEM REV
GALEMA S A	1997	26	233	CHEM SOC REV
GALEMA S	1999	55	10851	CHEM SOC REV
GOLDSCHMIDT S	1952	575	217	LIEBIGS ANN CHEM
GOPI H N	1998	39	9769	TETRAHEDRON LETT
GUICHARD G	2000	41	1553	TETRAHEDRON LETT
GUICHARD G	1999	64	8702	J ORG CHEM
HOLMES D L	1997	119	7665	J AM CHEM SOC
HUTCHINS S M	1995	36	2583	TETRAHEDRON LETT
KATRITZKY A R	1997	62	4155	J ORG CHEM
KIM J M	1996	37	5305	TETRAHEDRON LETT
KRUIJTZER J A W	1997	38	5335	TETRAHEDRON LETT
LAM P Y S	1994	263	380	SCIENCE
LIPWOWSKI A W	1986	29	1222	J MED CHEM

LOSSE G	1967	100	3314	CHEM BER
LOUPY A	1998		1213	SYNTHESIS-STUTTG SEP
MAJER P	1994	59	1937	J ORG CHEM
NOWICK J S	1996	118	2764	J AM CHEM SOC
NOWICK J S	1996	61	3929	J ORG CHEM
NOWICK J S	1992	57	7364	J ORG CHEM
NOWICK J S	1996	118	1066	J AM CHEM SOC
NOWICK J S	1992	57	3763	J ORG CHEM
NOWICK J S	1995	117	89	J AM CHEM SOC
NOWICK J S	1995	60	7386	J ORG CHEM
NOWICK J S	1996	118	2764	J AM CHEM SOC
OZAKI S	1972	72	457	CHEM REV
SCIALDONE M A	1998	63	4802	J ORG CHEM
STRAUSS C R	1995	48	1665	AUST J CHEM
TAKEDA K	1983	24	4569	TETRAHEDRON LETT
TAMILARASU N	1999	121	1597	J AM CHEM SOC
TANAKA K	2000	100	1025	CHEM REV
VARMA R S	1999	1	43	GREEN CHEM
VASANTHAKUMAR G R	2002	41	1733	INDIAN J CHEM B
VONGELDERN T W	1996	39	968	J MED CHEM
ZHANG X W	1997	62	6420	J ORG CHEM

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ACCESSION NUMBER: 2003:616519 SCISEARCH
THE GENUINE ARTICLE: 699BN
TITLE: Microwave-assisted coupling of carboxylic acids to a polymer bound hydrazine linker
AUTHOR: Lindquist C; Tedebark U; Ersoy O (Reprint); Somfai P
CORPORATE SOURCE: Amersham Biosci, S-75184 Uppsala, Sweden (Reprint); Royal Inst Technol, Dept Chem, S-10044 Stockholm, Sweden
COUNTRY OF AUTHOR: Sweden
SOURCE: SYNTHETIC COMMUNICATIONS, (2003) Vol. 33, No. 13, pp. 2257-2262.
ISSN: 0039-7911.
PUBLISHER: MARCEL DEKKER INC, 270 MADISON AVE, NEW YORK, NY 10016 USA

DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 12
ENTRY DATE: Entered STN: 1 Aug 2003
Last Updated on STN: 1 Aug 2003

ABSTRACT:
A set of carboxylic acids, all being potential scaffolds for combinatorial chemistry or **peptide synthesis**, were coupled to a polymer bound aryl hydrazine linker using **microwave** irradiation in good yields. Improved yields and reduced reaction times were achieved by using microwave-assisted heating compared to conventional heating.

CATEGORY: CHEMISTRY, ORGANIC
SUPPL. TERM PLUS: **SOLID-PHASE** SYNTHESIS; PEPTIDE-SYNTHESIS; ORGANIC-SYNTHESIS

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
*SMITH CREAT				PERS CHEM
DOLLE R E	2001	3	477	J COMB CHEM
JAMES I W	1999	55	4855	TETRAHEDRON
JUNG G	1999			COMBINATORIAL CHEM
LARHED M	2001	6	406	DRUG DISCOV TODAY

LI P	2000	56	8119	TETRAHEDRON
LIDSTROM P	2001	57	9225	TETRAHEDRON
MILLINGTON C R	1998	39	7201	TETRAHEDRON LETT
ROSENBAUM C	2001	42	5677	TETRAHEDRON LETT
SEMENOV A N	1995	45	303	INT J PEPT PROT RES
STIEBER F	1999	38	1073	ANGEW CHEM INT EDIT
ZHANG H C	1998	39	4449	TETRAHEDRON LETT

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ACCESSION NUMBER: 2004:25593 SCISEARCH
THE GENUINE ARTICLE: 753PT
TITLE: Study concerning the optimization of the 4-amino-3-iodo benzoic acid fixation reaction on **solid support** under the **microwave** activity
AUTHOR: Finaru A (Reprint); Berteina-Raboin S; Besson T; Guillaumet G
CORPORATE SOURCE: Univ Bacau, Fac Ingn, Calea Marasesti, 157, Bacau 5500, Romania (Reprint); Univ Bacau, Fac Ingn, Bacau 5500, Romania; Univ Orleans, Inst Chim Organ & Analit, UPRES A 6005, F-45067 Orleans 2, France; Univ La Rochelle, Pole Sci & Technol, LGPC, UPRES 2001, F-17042 La Rochelle, France
COUNTRY OF AUTHOR: Romania; France
SOURCE: REVISTA DE CHIMIE, (NOV 2003) Vol. 54, No. 11, pp. 895-898
.
ISSN: 0034-7752.
PUBLISHER: CHIMINFORM DATA S A, CALEA PLEVNEI NR 139, SECTOR 6, BUCHAREST R-77131, ROMANIA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: Romanian
REFERENCE COUNT: 14
ENTRY DATE: Entered STN: 12 Jan 2004
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ABSTRACT:
This paper reports the possibility to use the **microwave** to attach the small molecules, like 4-amino-3-iodo benzoic acid, in a very short time (3 min), onto the polymeric **resin** Rink Amide - Fmoc. This strategy may be used to increase the diversity of a compound library during the steps of a ***solid*** -**phase** synthesis.

CATEGORY: CHEMISTRY, MULTIDISCIPLINARY; ENGINEERING, CHEMICAL
SUPPLEMENTARY TERM: **solid-phase** synthesis; linker; rink anzide; peptidic couplage; **microwave**
SUPPL. TERM PLUS: **PROTECTED PEPTIDE**-FRAGMENTS; PHASE SYNTHESIS; DERIVATIVES; **RESIN**

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ANDREAS M L H	1999	40	3941	TETRAHEDRON LETT
ATHERTON E	1989			SOLID PHASE PEPTIDE
BREMBERG U	1999	64	1082	J ORG CHEM
CADDICK S	1995	51	10403	TETRAHEDRON
VIRGILIO A A	1994	116	11580	J AM CHEM SOC
FINARU A	2002	4	2613	ORG LETT
FINARU A	2002	43	787	TETRAHEDRON LETT
GONG Y D	1998	63	4854	J ORG CHEM
JUNG G	1996			COMBINATORIAL PEPTID
LARHED M	1996	61	9582	J ORG CHEM
LOUPY A	1998		1213	SYNTHESIS-STUTTG SEP

RINK H	1987	28	3787	TETRAHEDRON LETT
VARMA R S	1999		43	GREEN CHEM FEB
WANG S S	1973	95	1328	J AM CHEM SOC

L87 ANSWER 26 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:575629 SCISEARCH
THE GENUINE ARTICLE: XN635
TITLE: The studies of **microwave** effects on the chemical reactions
AUTHOR: Chen S T (Reprint); Tseng P H; Yu H M; Wu C Y; Hsiao K F; Wu S H; Wang K T
CORPORATE SOURCE: ACAD SINICA, INST BIOL CHEM, TAIPEI 11529, TAIWAN (Reprint); NATL TAIWAN UNIV, DEPT CHEM, TAIPEI 10098, TAIWAN
COUNTRY OF AUTHOR: TAIWAN
SOURCE: JOURNAL OF THE CHINESE CHEMICAL SOCIETY, (JUN 1997) Vol. 44, No. 3, pp. 169-182.
ISSN: 0009-4536.
PUBLISHER: CHINESE CHEM SOC, PO BOX 609, TAIPEI 10099, TAIWAN.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: English
REFERENCE COUNT: 43
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997

ABSTRACT:

Microwave heating involves direct absorption of energy by functional groups that bear ionic conductivity or a dipole rotational effect, and this energy is then released into the surrounding solution. This absorption of energy causes the functional groups involved to have higher reactivity to other surrounding reactants than when they are simply incubated with the reactants at the same temperature. In other word the enhanced rate of the reaction can be due to the reactant stirred by the molecular dipole rotation and molecules themselves acting as a stirring bar. In contrast to conventional heating, the salient feature of ''dipole rotation'' constitutes one efficient form of ''molecular agitation'' or ''molecular stirring'' many aspects of which can be explore in chemical reactions. We will discuss some of the useful applications of this ''molecular agitation'' by means of ***microwave*** irradiation. Using this unique technology, we have developed: 1) a method to control the cleavage sites of **peptide** bonds, especially those bonds connected to aspartic acid residues inside the native **peptides** and proteins, 2) a method to increase coupling efficiency in **solid-phase peptide** ***synthesis*** using a common **microwave** oven, 3) a novel procedure that increases the rate of alcalase-catalyzed reactions using **microwave** irradiation in **peptide**-bond formation with proline as a nucleophile and selective benzoylation of a pyranoside derivative, 4) a procedure to solubilize and hydrolyze retrograded starch, 5) a novel procedure to enhance the rate of saponification in a serum sample for very long chain fatty acid analysis.

CATEGORY: CHEMISTRY
SUPPLEMENTARY TERM: **microwave** irradiation; molecular agitation; rate enhancement; enzymatic catalysis; specific cleavage; **peptide** bond; saponification; hydrolysis
SUPPL. TERM PLUS: PHASE **PEPTIDE**-SYNTHESIS; AMINO-ACID ANALYSIS; APOLIPOPROTEIN-A-I; PROTEIN HYDROLYSIS; **PROTECTING** GROUPS; ALCOHOL **RESIN**; CLEAVAGE; DERIVATIVES; FRAGMENTS; ALCALASE

REFERENCE(S):

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ABDALLA S	1987	23	83	CHROMATOGRAPHIA
ATHERTON E	1983		1060	J CHEM SOC CHEM COMM
ATHERTON E	1986		1763	J CHEM SOC CHEM COMM
BERNATOWICZ M S	1989	30	4341	TETRAHEDRON LETT
BODANSZKY M	1985	26	550	INT J PEPT PROT RES
CHEN S T	1994	4	443	BIOORG MED CHEM LETT
CHEN S T	1987	30	572	INT J PEPT PROT RES
CHEN S T	1990		807	J CHEM SOC CHEM COMM
CHEN S T	1990		1045	J CHEM SOC CHEM COMM
CHEN S T	1992	57	6960	J ORG CHEM
CHEN S T	1995	14	205	J PROTEIN CHEM
CHEN S T	1992	22	391	SYNTHETIC COMMUN
CHIOU S H	1988	448	404	J CHROMATOGR
CHIOU S H	1989	491	424	J CHROMATOGR-BIOMED
FIELDS G B	1990	35	161	INT J PEPT PROT RES
GRUNDLER G	1982		1826	LIEBIGS ANN CHEM
HAMILTON R J	1992		54	LIPID ANAL
HAMILTON R J	1992		59	LIPID ANAL
HOLLA E W	1989	28	220	ANGEW CHEM INT EDIT
HOLME D J	1993		454	ANAL BIOCHEM
INGLIS A S	1983	91	324	METHOD ENZYMOL
KENT S	1985		P29	SYNTHETIC PEPTIDES B
LAHM H W	1988	7	258	J PROTEIN CHEM
LIGHT A	1967	11	417	METHOD ENZYMOL
LLOYD H	1991		909	PEPTIDES 1991
LU G	1981	46	3433	J ORG CHEM
MARCUS F	1985	25	542	INT J PEPT PROT RES
NAKAGAWA S H	1985	107	7087	J AM CHEM SOC
NAKAGAWA S H	1983	48	678	J ORG CHEM
OGINO T	1980	34	117	FOLIA PSYCHIAT NEURO
PAQUET A	1982	60	976	CAN J CHEM
PISZKIEWICZ D	1970	40	1173	BIOCHEM BIOPH RES CO
RADEMANN J	1995	269	217	CARBOHYD RES
SARIN V K	1981	117	147	ANAL BIOCHEM
SCHNEIDER J	1988	54	363	CELL
SCHULTZ J	1962	1	694	BIOCHEMISTRY-US
SCHULTZ J	1967	11	25	METHOD ENZYMOL
SIEBER P	1987	28	6147	TETRAHEDRON LETT
TSUNG C M	1965	4	793	BIOCHEMISTRY-US
VANWOERKOM W J	1991	38	103	INT J PEPT PROT RES
WANG K T	1991	2	241	TECHNIQUES PROTEIN C
WANG S S	1973	95	1328	J AM CHEM SOC
YANG G T	1984			SOLID PHASE PEPTIDE

FILE 'HOME' ENTERED AT 16:27:24 ON 30 AUG 2005

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=> d his full

     (FILE 'HOME' ENTERED AT 15:51:25 ON 30 AUG 2005)

     FILE 'CAPLUS' ENTERED AT 15:51:47 ON 30 AUG 2005
                SET LINE 250
                SET DETAIL OFF
                E US2003-604022/AP,PRN 25
                SET NOTICE 1000 SEARCH
L1            1 SEA ABB=ON  US2003-604022/AP
                SET NOTICE LOGIN SEARCH
                SET LINE LOGIN
                SET DETAIL LOGIN
                D SCAN
                E SOLID PHASE SYNTHESIS+ALL/CT
                E MICROWAVE+ALL/CT
L2        21378 SEA ABB=ON  PEPTIDES/CT(L)SPN/RL
L3        73571 SEA ABB=ON  MICROWAVE#/OBI
L4        43835 SEA ABB=ON  SOLID/OBI(W)(PHASE#/OBI OR SUPPORT#/OBI)
L5           11 SEA ABB=ON  L2 AND L3 AND L4
L6         2794 SEA ABB=ON  COLLINS J?/AU
L7         1805 SEA ABB=ON  LAMBERT J?/AU
L8         2091 SEA ABB=ON  COLLINS M?/AU
L9            1 SEA ABB=ON  L6 AND L7 AND L8
                D SCAN TI
L10           6 SEA ABB=ON  (L6 OR L7 OR L8) AND L2
                D SCAN TI

     FILE 'WPIDS' ENTERED AT 15:55:44 ON 30 AUG 2005
L11         538 SEA ABB=ON  COLLINS J?/AU
L12         262 SEA ABB=ON  LAMBERT J?/AU
L13         427 SEA ABB=ON  COLLINS M?/AU
L14           1 SEA ABB=ON  L11 AND L12 AND L13
                D SCAN
                D TRIAL
L15       87756 SEA ABB=ON  ?PEPTIDE?
L16       30010 SEA ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L17       67871 SEA ABB=ON  MICROWAV?
L18           3 SEA ABB=ON  (L11 OR L12 OR L13) AND L15 AND (L16 OR L17)
                D TRIAL 1-3
L19           2 SEA ABB=ON  L18 NOT L14
                D KWIC 1-2
L20           1 SEA ABB=ON  (L11 OR L12 OR L13) AND L15 AND L17
L21           8 SEA ABB=ON  L15 AND L16 AND L17
                D TRIAL 1-8
L22       15992 SEA ABB=ON  L15(8A)(SYNTHESI? OR PREP?)
L23           1 SEA ABB=ON  L22 AND L16 AND L17
L24           9 SEA ABB=ON  L22 AND L17
L25           8 SEA ABB=ON  L24 NOT L23
                D TRIAL 1-8
                D KWIC 1 4 8

     FILE 'MEDLINE' ENTERED AT 16:01:14 ON 30 AUG 2005
L26        3358 SEA ABB=ON  COLLINS J?/AU
L27        1204 SEA ABB=ON  LAMBERT J?/AU
L28        1946 SEA ABB=ON  COLLINS M?/AU
L29           0 SEA ABB=ON  L26 AND L27 AND L28
                E PEPTIDE SYN/CT
                E PEPTIDE SYNTHESIS/CT
                E PEPTIDES+ALL/CT
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L30       82892 SEA ABB=ON  PEPTIDES/CT
                E MICROWAVE/CT
                E E5+ALL
L31        6859 SEA ABB=ON  MICROWAVES/CT
L32           0 SEA ABB=ON  (L26 OR L27 OR L28) AND L30 AND L31
L33          20 SEA ABB=ON  L30 AND L31
                D TRIAL 1-5
L34       25603 SEA ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L35           2 SEA ABB=ON  L30 AND L31 AND L34
L36       23746 SEA ABB=ON  D12./CT(L)CS/CT
L37           3 SEA ABB=ON  L36 AND L31 AND L34
                D QUE
L38           5 SEA ABB=ON  L31 AND L34 AND D12./CT
                D TRIAL 1-5

     FILE 'EMBASE' ENTERED AT 16:07:25 ON 30 AUG 2005
L39        2766 SEA ABB=ON  COLLINS J?/AU
L40        1088 SEA ABB=ON  LAMBERT J?/AU
L41        1824 SEA ABB=ON  COLLINS M?/AU
L42           0 SEA ABB=ON  L39 AND L40 AND L41
                E MICROWAVE/CT
                E MICROWAVES/CT
                E E3+ALL
                E E2+ALL
L43        5188 SEA ABB=ON  MICROWAVE RADIATION/CT
                E PEPTIDE SYNTHES/CT
                E E4+ALL
L44        7824 SEA ABB=ON  PEPTIDE SYNTHESIS/CT
L45       28161 SEA ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
                D TRIAL 100-105
L46         159 SEA ABB=ON  SOLID PHASE SYNTHESIS/CT
L47           0 SEA ABB=ON  (L39 OR L40 OR L41) AND L43 AND L44
L48           5 SEA ABB=ON  (L39 OR L40 OR L41) AND L44
                D TRIAL 1-5
                D KWIC 1-2
L49           0 SEA ABB=ON  L43 AND L44 AND L46
L50           2 SEA ABB=ON  L43 AND L44 AND L45
                D TRIAL 1-2
                E PEPTIDE+ALL/CT
L51       23580 SEA ABB=ON  PEPTIDE/CT
L52           0 SEA ABB=ON  L51 AND L46 AND L43
L53           1 SEA ABB=ON  L51 AND L45 AND L43
                D TRIAL

     FILE 'DISSABS' ENTERED AT 16:11:59 ON 30 AUG 2005
L54         374 SEA ABB=ON  COLLINS J?/AU
L55         108 SEA ABB=ON  LAMBERT J?/AU
L56         252 SEA ABB=ON  COLLINS M?/AU
L57        5692 SEA ABB=ON  MICROWAV?
L58       23730 SEA ABB=ON  ?PEPTIDE?
L59        4117 SEA ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L60           0 SEA ABB=ON  (L54 OR L55 OR L56) AND L58 AND L57
L61           1 SEA ABB=ON  L58 AND L57 AND L59
L62       38242 SEA ABB=ON  PROTECT? OR DEPROTECT?
L63           1 SEA ABB=ON  L58 AND L57 AND L62
                D SCAN
                D KWIC
                D KWIC L61

     FILE 'STNGUIDE' ENTERED AT 16:13:59 ON 30 AUG 2005
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     FILE 'STNGUIDE' ENTERED AT 16:14:54 ON 30 AUG 2005

     FILE 'JICST-EPLUS, PASCAL, BIOTECHNO, ESBIOBASE, BIOSIS, LIFESCI,
     BIOTECHDS, ANABSTR, SCISEARCH' ENTERED AT 16:16:22 ON 30 AUG 2005
L64        14254 SEA ABB=ON  L6
L65         6197 SEA ABB=ON  L7
L66        11333 SEA ABB=ON  L8
L67       183256 SEA ABB=ON  MICROWAV?
L68      1596598 SEA ABB=ON  PEPTIDE# OR POLYPEPTIDE# OR OLIGOPEPTIDE#
L69       190966 SEA ABB=ON  SOLID(2A)(PHASE# OR SUPPORT#)
L70       887799 SEA ABB=ON  RESIN# OR COLUMN?
L71            0 SEA ABB=ON  L64 AND L65 AND L66
L72            7 SEA ABB=ON  (L64 OR L65 OR L66) AND L67 AND L68
L73           87 SEA ABB=ON  L67 AND L68 AND (L69 OR L70)
L74        92131 SEA ABB=ON  L68(5A)(SYNTHESI? OR PREP?)
L75      1342730 SEA ABB=ON  PROTECT? OR DEPROTECT?
L76            8 SEA ABB=ON  L73 AND L75
L77           41 SEA ABB=ON  L74 AND L67 AND (L69 OR L70)
L78           23 SEA ABB=ON  L74(S) L67 AND (L69 OR L70)

     FILE 'STNGUIDE' ENTERED AT 16:21:18 ON 30 AUG 2005

     FILE 'CAPLUS' ENTERED AT 16:22:37 ON 30 AUG 2005
               D QUE L1
               D QUE L9
               D QUE L10
L79            6 SEA ABB=ON  L1 OR L9 OR L10

     FILE 'WPIDS' ENTERED AT 16:22:39 ON 30 AUG 2005
               D QUE L14
               D QUE L20
L80            1 SEA ABB=ON  L14 OR L20

     FILE 'MEDLINE' ENTERED AT 16:22:41 ON 30 AUG 2005
               D QUE L29
               D QUE L32

     FILE 'EMBASE' ENTERED AT 16:22:42 ON 30 AUG 2005
               D QUE L42
               D QUE L47

     FILE 'DISSABS' ENTERED AT 16:22:43 ON 30 AUG 2005
               D QUE L60

     FILE 'JICST-EPLUS, PASCAL, BIOTECHNO, ESBIOBASE, BIOSIS, LIFESCI,
     BIOTECHDS, ANABSTR, SCISEARCH' ENTERED AT 16:22:44 ON 30 AUG 2005
               D QUE L71
               D QUE L72

     FILE 'CAPLUS, BIOSIS, SCISEARCH, WPIDS' ENTERED AT 16:22:59 ON 30 AUG 2005
L81           12 DUP REM L79 L72 L80 (2 DUPLICATES REMOVED)
                    ANSWERS '1-6' FROM FILE CAPLUS
                    ANSWER '7' FROM FILE BIOSIS
                    ANSWERS '8-12' FROM FILE SCISEARCH
               D IBIB ED ABS HITIND 1-6
               D IALL 7-12

     FILE 'STNGUIDE' ENTERED AT 16:23:24 ON 30 AUG 2005
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     FILE 'CAPLUS' ENTERED AT 16:25:30 ON 30 AUG 2005
                D QUE L5
L82           10 SEA ABB=ON  L5 NOT L79

     FILE 'WPIDS' ENTERED AT 16:25:32 ON 30 AUG 2005
                D QUE L23
L83            0 SEA ABB=ON  L23 NOT L80

     FILE 'MEDLINE' ENTERED AT 16:25:36 ON 30 AUG 2005
                D QUE L35
                D QUE L37
L84            3 SEA ABB=ON  L35 OR L37

     FILE 'EMBASE' ENTERED AT 16:25:38 ON 30 AUG 2005
                D QUE L50
                D QUE L53
L85            3 SEA ABB=ON  L50 OR L53

     FILE 'DISSABS' ENTERED AT 16:25:40 ON 30 AUG 2005
                D QUE L61

     FILE 'JICST-EPLUS, PASCAL, BIOTECHNO, ESBIOBASE, BIOSIS, LIFESCI,
     BIOTECHDS, ANABSTR, SCISEARCH' ENTERED AT 16:25:41 ON 30 AUG 2005
                D QUE L76
                D QUE L78
L86           23 SEA ABB=ON  (L76 OR L78) NOT L72

     FILE 'STNGUIDE' ENTERED AT 16:25:54 ON 30 AUG 2005

     FILE 'MEDLINE, CAPLUS, DISSABS, EMBASE, PASCAL, ESBIOBASE, BIOSIS,
     LIFESCI, ANABSTR, SCISEARCH' ENTERED AT 16:26:56 ON 30 AUG 2005
L87           26 DUP REM L84 L82 L61 L85 L86 (14 DUPLICATES REMOVED)
                      ANSWERS '1-3' FROM FILE MEDLINE
                      ANSWERS '4-12' FROM FILE CAPLUS
                      ANSWER '13' FROM FILE DISSABS
                      ANSWER '14' FROM FILE EMBASE
                      ANSWER '15' FROM FILE PASCAL
                      ANSWER '16' FROM FILE ESBIOBASE
                      ANSWERS '17-18' FROM FILE BIOSIS
                      ANSWER '19' FROM FILE LIFESCI
                      ANSWERS '20-26' FROM FILE SCISEARCH
                D IALL 1-3
                D IBIB ED ABS HITIND 4-12
                D IALL 13-26

     FILE 'HOME' ENTERED AT 16:27:24 ON 30 AUG 2005


     FILE HOME

     FILE CAPLUS

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FILE COVERS 1907 - 30 Aug 2005 VOL 143 ISS 10
FILE LAST UPDATED: 29 Aug 2005 (20050829/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE WPIDS
FILE LAST UPDATED: 26 AUG 2005 <20050826/UP>
MOST RECENT DERWENT UPDATE: 200555 <200555/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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FILE MEDLINE
FILE LAST UPDATED: 27 AUG 2005 (20050827/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE DISSABS
FILE COVERS 1861 TO 26 AUG 2005 (20050826/ED)

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 26, 2005 (20050826/UP).

FILE JICST-EPLUS
FILE COVERS 1985 TO 22 AUG 2005 (20050822/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE PASCAL
FILE LAST UPDATED: 29 AUG 2005 <20050829/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE IN THE BASIC INDEX (/BI) FIELD <<<

FILE BIOTECHNO
FILE LAST UPDATED: 7 JAN 2004 <20040107/UP>
FILE COVERS 1980 TO 2003.

>>> BIOTECHNO IS NO LONGER BEING UPDATED AS OF 2004 <<<

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN /CT AND BASIC INDEX <<<

FILE ESBIOBASE
FILE LAST UPDATED: 30 AUG 2005 <20050830/UP>
FILE COVERS 1994 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN /CC, /ORGN, AND /ST <<<

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 August 2005 (20050825/ED)

FILE RELOADED: 19 October 2003.

FILE LIFESCI
FILE COVERS 1978 TO 17 Aug 2005 (20050817/ED)

FILE BIOTECHDS
FILE LAST UPDATED: 25 AUG 2005 <20050825/UP>

>>> USE OF THIS FILE IS LIMITED TO BIOTECH SUBSCRIBERS <<<

>>> NEW CLASSIFICATION SYSTEM FROM 2002 ONWARDS - SEE HELP CLA <<<

>>> NEW DISPLAY FIELDS LS AND LS2 (LEGAL STATUS DATA FROM
THE INPADOC DATABASE) AVAILABLE - SEE NEWS <<<

FILE ANABSTR
FILE LAST UPDATED: 30 AUG 2005 <20050830/UP>
FILE COVERS 1980 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE IN
THE BASIC INDEX (/BI) AND CHEMICAL NAME (/CN) FIELDS <<<

FILE SCISEARCH

FILE COVERS 1974 TO 25 Aug 2005 (20050825/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

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